# MONEY

# MONEY:

## ITS CONNEXION WITH RISING AND FALLING PRICES

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# CONTENTS

## PART I

## GENERAL PRINCIPLES



## PART II

## FURTHER ELUCIDATIONS

## PART III



## THE RECENT HISTORICAL EXAMPLES

# MONEY

## ITS CONNEXION WITH RISING AND FALLING PRICES

## PART I

## GENERAL PRINCIPLES

### CHAPTER I

### RECOGNITION AND MEASUREMENT OF CHANGES IN THE VALUE OF MONEY

MANY economic principles can be dealt with best in the first place on the assumption that when a change is observed in the price of a particular commodity or service it means a change of value peculiar to that one kind of commodity or service, and is not merely a part of a general change in the level of prices, which is only another name for a change in the value of money. In civilized countries in ordinary times, as in England for nearly a century before war broke out in 1914, general changes in prices—rises or falls of prices taken as a whole—were perceptible enough to experts and students, but were too gradual to be realized by the mass

of the people, or even to exercise any easily recognized influence on the actions of the commercial and investing classes. But the war brought about changes in the general level of prices or value of money so great and so rapid that they have been perceptible to everyone, and have immensely disturbed the relative material welfare of classes and individuals and been an acknowledged cause of action in numerous directions.

To endeavour to acquire some clear notion of what makes the value of money change has become the duty of all who think themselves capable of expressing useful opinions on economic affairs. The following pages embody an attempt to assist in this task. They do not profess to be exhaustive: investigation of the past and discussion of schemes for the future have both been sacrificed in order that space might be gained for treatment of the present.

A great many attempts have been made to define money in few words. They have failed like similar attempts to define other economic terms commonly used in ordinary language. They fail because money, like most of the other great economic terms, and like nearly all words in common use, means different things in different contexts. In a context like the present, which suggests an investigation into the causes of rising and falling prices, it means the unit of account commonly used in purchases and sales and other commercial transactions. In the United Kingdom, Australia and South Africa, people buy goods with and sell them for pounds, shillings and pence, and " prices " are always expressed in quan-

tities of these units: in the United States and Canada, dollars and cents are used for the purpose: in France, francs and centimes: in India, rupees, annas and pice. But as the cent and centime are merely decimal fractions of the dollar and franc, and the shilling and penny merely vulgar fractions of the pound, and annas and pice the same of the rupee, we can say for short and without any risk of being misunderstood, that the unit of account in these countries is the pound, the dollar, the franc, and the rupee. When, then, it is said in England that the value of money has fallen, what is meant is that a pound sterling, £1, will buy less than before: when the same words are used in the United States, what is meant is that a dollar, $1, will buy less; when in France, that a franc, 1f., and in India, that a rupee, R1, will buy less. Thus an alteration in the general level of prices is the same thing as an alteration in the value of money, except of course that it is upside-down, a fall in the value of money being a rise in the general level of prices, and a rise in its value being a fall in that level. As prices are expressed in quantities of the unit of account, this is a matter which could not possibly be otherwise. The price of things is the money got for them; the value of money is the things got for it.

Till recently there have been many persons, and perhaps there still are some, who manifest an extraordinary reluctance to admit the occurrence of any change in the general level of prices in their own time. They appear to have at the back of their minds an impression that money has become in-

variable in value, so that prices taken as a whole are no longer subject to change, however much variation there may be in the prices of particular commodities. Why such changes should have been possible in the past, as they admit, and not in the present, they are never able to explain, and their reluctance to admit the possibility of changes in the present is only the consequence of their being so habitually accustomed to measure values by money that they feel towards any suggestion that the value of money itself wants measuring just as the aged villager feels towards the suggestion that the distance between two milestones from which he has throughout life taken his idea of a mile is fifty yards short; and the suggestion that the value of money has changed appears as incredible to them as the suggestion that the whole of the West Riding of Yorkshire had risen a foot between two Ordnance Surveys would appear to the average inhabitant of Huddersfield.

Being unable to bring forward any reasons why changes in the value of money and general level of prices should have become impossible, those who dislike the idea are obliged to confine themselves to questioning the existence of each particular change which happens to take place in their time. It is therefore necessary for us to begin by making clear how such changes may be recognized and roughly measured. We cannot expect to find in actual life a general rise of prices manifesting itself as a uniform rise, say of 10 per cent in the price of each single commodity and service. If we did expect such a

thing, it would imply that we also thought that if the general level of prices remained stationary, say between to-day and next year, the price of each single commodity would be precisely the same next year as to-day. Of course we expect nothing of the kind: we know that particular prices are affected by various diverse influences and are constantly changing. In the event of a general rise or fall of prices there is no reason for supposing that these influences would be any more quiescent than when no such change was proceeding. When there is a general rise, some things will rise much and others little, and some are likely even to fall. How then can we judge whether there has been a change in the general level, and if we are satisfied that such a change has occurred, how can we judge whether it is great or small?

The process is analogous to that which would be employed in ascertaining whether and, if so, by how much the existing level of an acre of ground which has been very much disturbed by operations upon it is lower than it was before. Let us say that Jones and Smith have been comrades in the war, and on the conclusion of peace they return home to find that a field belonging to Smith has been used for training recruits in trench warfare. Formerly it was flat and level with the surrounding fields, now the digging and mining have made it into something like a model of Switzerland. Smith is informed by a friend (who does not want his name mentioned) and believes, that Jones's father, the only haulier in the village, has taken advantage of its disturbed

condition to carry away many loads of gravel from it. He tells this to Jones, who replies indignantly, "Father would never do a thing like that," and points out that if so much gravel had been removed, the general level of the ground would have been perceptibly reduced. Smith and Jones go together to look at the ground, and to Smith's eye the field seems on the whole very decidedly lower—"about two feet," he guesses. Jones is led by bias in favour of Jones senior to think there is no difference, and draws Smith's attention to the particularly high parts of the ground: Smith in return points to the biggest depressions. To settle the question, they agree to run a level line of rods across the field sufficiently high to clear the hills and measure down from it at frequent fixed intervals, say every two yards, to the present surface. This done, they find that the average of all the measurements indicates a level of 10 inches below the old level. This is a blow to Jones, but not so much as Smith expected, so the two agree that this result "is not sufficient to go by," and take another line across the field; this shows an average fall of 8 inches, and averaged with the first line, 9 inches. Both being still dissatisfied, they take four more lines which give as their results falls of 11, 9, 12 and 8 inches. The average for the whole of the measurements is now 9⅔, and both Smith and Jones see that more measurements will make very little difference. Smith is willing to admit that the fall need not be more than about 10 inches, and Jones finds it expedient to abandon the argument that nothing has been

removed, and to find some other defence for his parent.

Commodities and services are so numerous in kind and the kinds shade into each other so gradually, that to take into account the price of all of them is much like taking into account the level of every part of a rough field, when smoothing it is not to be thought of. We cannot do it literally, and must be content with taking a sufficient number of measurements at points selected without bias. The ordinary person's impression about a general change of prices is much like Smith's measurement of the level of his field "by the eye"; it is likely that he will be able to recognize a large change of prices—probably anything over 25 per cent, just as Smith is likely to be able to detect a fall of 10 feet in the general level of his field. When the change is not great, he is just as likely as Jones to be misled by bias into denying its existence, and in all cases bias is likely to mislead him, as it led Smith, into very faulty estimates. To arrive at agreement it is necessary, as in the case of the disturbed field, to introduce statistical methods, and this is done by the construction of what are called "index numbers" of prices. The prices of a large number of commodities at some particular date, called for this purpose the "base year" or the "standard year," are collected, and the prices of the same commodities at subsequent (or earlier) dates are represented as percentages of the prices of the base year. If beef cost 10*d*. per lb. in the base year and 13*d*. at some later date, it is put down at 100 for the first and

130 for the second period, since if it takes 13*d.* to buy what formerly could be got for 10*d.*, it takes 130*d.* to buy what could formerly be got for 100*d.* The prices of a number of other commodities are treated in the same way, so that each stands at 100 for the base year and some other number, larger or smaller than 100 according as its price has risen or fallen, for the period to be compared with the base year. Then, as each of the commodities stands at 100 for the base year, the average or "index number" for that year will be 100, while the index number for the other date will be the average of a number of figures, each of which may be above or below 100. When this index number is above 100, the excess will indicate a rise of that much per cent in the general level of prices, and when it is below the deficit will indicate a fall of that much. Thus in what is known as Sauerbeck's index number, in which the base or standard period is the years 1867–77 averaged, the index number for 1896 is 61 per cent of the 1867–77 average; that for each of the years 1912 to 1914 is 85. Then there was an annual rise till 1920, for which the figure was 251. An abrupt fall to 155 in 1921 and 131 in 1922 follows; then, after a slight rise to 139 in 1924, the figure fell every year to 115 in 1929 and then with a crash to 97 in 1930 and 83 in 1931. (The figures for each year are the average of twelve end-of-month records, e.g. the 251 for 1920 is made up of figures rising from 245 in January to 266 in April and falling to 207 in December.) There are many difficulties in the construction of an index

number, the chief being that of finding commodities which do not vary much in kind or quality, and have prices about which dispute is impossible, but none of the difficulties are sufficient to prevent the method from making it possible to prove any substantial change in the general level of prices and to measure approximately its magnitude.[1]

Granting that changes in the general level of prices or value of money can and do occur, and that we can appreciate their existence and approximately measure their magnitude, we can proceed to consider their causes. In other words we can ask why is it that a unit of account such as the pound sterling or the rupee is of greater value—will buy more—at one time than at another? The subject, or so much of it as is of immediate modern interest, may be divided according as the unit of account is a mere quantity of bullion, a coin kept by limitation at a value above that of its bullion contents, or, finally, a note.

[1] For the discussion of the principles of index numbers, see A. L. Bowley, *Elements of Statistics*.

## CHAPTER II

## BULLION MONEY

### § 1. *Identity, under the Gold Standard, of the Value of Money with that of Gold.*

THE unit of account has often and for long periods been nothing but a quantity—which has almost always if not always meant a weight—of a particular metal. The English "pound," still indicated by the initial letter of the Roman *libra*, being the name of a weight as well as a unit of account, serves to remind us of that time. The introduction of coinage makes it possible to count the amount of metal, "reckon it by tale," instead of weighing it with scales every time it passes from hand to hand, which is a great improvement, but it need not make, and sometimes has not made, any material difference to the value of the unit; a mint may coin all the bullion which anyone chooses to bring to it and give it back to him free of any deduction or charge, while at the same time the law allows anyone to do what he likes with the coin—to export it from the country in which it is or to melt it down at home for any purpose whatever. In this case a pound weight of bullion is freely convertible into a pound weight of coin and a pound weight of coin

is freely convertible into a pound of bullion, and the two must therefore be of equal value: if the coin were worth more than an equal weight of uncoined metal, people would be carrying the uncoined to the Mint: if coin were worth less than uncoined, they would be melting the coin down. The fact that the uncoined metal and the coined continue to exist side by side is proof of their being, weight for weight, of equal value. We can say unhesitatingly that the two must stand at the same level just as much as the water in two cisterns connected by a large pipe.

This was the situation, for example, in England from soon after the end of the Napoleonic war till 1914; the unit of account called the "pound," originally a pound weight of silver, had through various vicissitudes come to be represented by a gold coin called a sovereign made out of 113 grains of pure gold and 10¼ of negligible alloy; coinage was free and gratuitous, and coins could be melted or transported anywhere at the will of the owner. What, by an historical survival, was called "a pound" might have been translated into 113 grains of fine gold in every contract and commercial transaction without producing any sort of dislocation or causing anyone to lose or gain. It is true that people constantly paid each other "pounds" without passing either shapeless lumps of gold or sovereigns from hand to hand: they paid in bank-notes and they paid in cheques, but anyone who got a five-pound bank-note (no smaller notes were allowed in England and Wales) could, if he pleased, demand

five sovereigns for it from the bank that issued it, and anyone who received a good cheque could demand payment of its amount either in sovereigns or in Bank of England notes which could be "converted into" sovereigns by demand on the Bank. So that anyone paying or receiving "pounds" was always giving or getting something equivalent to 113 grains of gold. Thus the value of the pound was identical with the value of gold—what a pound would "buy" was just the same as what 113 grains of gold would exchange for.

So the value or purchasing power of English money —of the pound sterling—could be, and generally was, quite properly discussed as the value of gold. An answer to the question what made gold exchange for more of other commodities on the whole was an answer to the question what made the pound exchange for or "buy" more of other commodities on the whole. The "gold standard" was in force.

§ 2. *The Demand for Gold.*

The value of gold or silver—let us say gold for short—is dependent on just the same things as the value of any other metal. If more people demand it (that is, want it and have means to pay for it), or if the same number of persons demand more of it, it will rise in value, and vice versa. If more persons are willing and able to produce it, or if the persons already engaged in its production are able and willing to produce more of it, its value will tend to fall.

No one will find much difficulty in appreciating

this so far as the demand for purposes other than monetary are concerned. Anyone can see that gold is a metal which is prized for purposes of ornament, which is extraordinarily convenient for hoarding as a store of treasure to be expended at a future date, and which is at present very useful for many industrial purposes and would be gladly used for many more if only it were cheaper. About the changes of demand in relation to all these there is so little difficulty that they are often ignored. But they are far too important for that, as is suggested by the fact that they have been estimated in ordinary times to take somewhere in the neighbourhood of a half of the annual product of the metal. We must always remember that the demand tends to increase as people become richer and more numerous, that it tends to decrease as security grows and the habit of keeping hidden hoards decays, and that it varies with industrial discovery, as, for example, the invention of gold plates in dentistry, which increased the demand, and the invention of vulcanite plates, which diminished it. Further we must note that for many industrial uses the demand is extraordinarily elastic, since if gold were cheaper its use would be extended enormously—if it were cheap enough an enormous number of poor people who now have no gold ornaments would have some, and if it were cheaper still it would be largely used for roofing houses.

The demand for gold for purposes of currency is more difficult to deal with, owing to the traditional expositions of monetary theory being based on a

state of things which, after long decay, has only disappeared altogether quite recently.

We must be careful to distinguish between the demand for currency of all sorts as a whole and the demand for such part of it as consists or consisted of gold. The amount of currency of all sorts taken together in existence at any one moment of time is the sum of the amounts in the possession of individuals and institutions at that moment. It cannot grow larger without an increase either in the number of individuals and institutions who have holdings or an increase in the average magnitude of the single holding. Other things being equal, therefore, an increase in the numbers of persons and institutions with separate holdings will increase the aggregate demand for currency in just the same way as, other things being equal, an increase in the number of persons with separate houses will increase the demand for houses. Such an increase may of course be brought about by an increase of population if the additional numbers do not consist entirely of very small children, very infirm or aged persons, paupers and others who have no separate holdings of currency. That qualification suggests that an increase may also be brought about by increasing the proportion of the people having separate holdings and by increasing the number of institutions with separate holdings: for example, when a number of old people were taken out of the workhouses and given money upon which to maintain themselves, a large number of new holdings were created, each old-age pensioner now having his little stock: and

when a new company for supplying anything is established, a fresh separate holding of currency is almost always set up.

Given the number of separate holdings, the aggregate amount of currency will depend on the magnitude of the average separate holding. The foundation of a person's or an institution's want of such a holding of currency is easy to see: it is the necessity or convenience of having something in hand out of which to make payments during periods when they exceed receipts.

Before the introduction of banks the amounts of currency (then entirely consisting of coins) which each individual required to hold varied much more closely than at present with his wealth and with the length of the periods for which payments such as rent and wages were made. Prosperous persons able to save considerable amounts but without businesses of their own to invest in would accumulate large sums in currency either for use in old age or for investment when opportunity presented itself. Pepys tells us how, in the reign of Charles II, he buried thousands of pounds in coin in his garden. A rich landlord with a large rent roll would be likely to have a bigger amount of currency in his possession at any time than the landlord with a small rent-roll. The richer man would receive £500 each quarter day, and gradually use that sum up till the next quarter came round: the poorer would do the same with the £100 he received at the quarter, and so would always have only about one-fifth as much in hand as the other. The farmer

who paid £25 a quarter would be likely to have much less currency in hand for some time before quarter day than a neighbour who paid £100. So, too, any manufacturer who had large sums to pay in wages at fortnightly intervals would have to hold for at least a considerable part of the fortnight more currency than his neighbour who had only a small wages bill to provide for. And supposing a custom came in of paying rents only twice a year instead of four times, both the landlord and the farmer would have to keep more currency by them on the average: and if weekly wages became the custom in place of fortnightly, both employers and workmen would have to keep less by them on the average, as their stocks would be replenished more frequently. Nowadays the introduction of banks at which well-to-do persons have accounts has altered all this. It has enabled savers to accumulate in their bank accounts without the anxiety of holding quantities of currency in their houses or buried in their gardens. It has done away with the necessity of a tenant holding an amount of currency in preparation for paying his rent and gradually increasing it as quarter day draws nearer, and also with the necessity of landlords holding a large amount of currency after quarter day and letting it down only gradually during the quarter. The rent is paid by a bank writing certain figures in its books which transfers the sum from the tenant to the landlord.

The firm that has to pay £1,000 in wages does not in modern times have to accumulate £1,000 gradually throughout the week before pay day, but simply

sends a clerk to the bank for the money an hour or two before it is paid out.

The change did not much affect the size of the holdings of currency required by the poorer members of the community who have no bank accounts (except with the savings banks), and whose savings have not till very recently formed any large proportion of the aggregate saved, but it greatly reduced the size of the holdings required by the more wealthy, and consequently tended to diminish the demand for coins of the highest value, and these were gold coins, so that even if coins had continued to be the only kind of currency, the demand of individuals for gold for monetary purposes would have been reduced.

But along with banking accounts bank-notes were introduced, and, after some centuries of competition, these have completely expelled gold coins from the currency holdings of the people in Western countries. The consequence is that demand for gold for monetary purposes has become confined to the semi-state banks now usually called central banks.

But why, the reader may well ask, should the central banks want gold if the people of their respective countries prefer bank-notes?

The answer is firstly, that even a country which was completely isolated or comprised the whole world, if it desired to adhere to the gold standard—that is, to make its unit of account vary in value with gold—would do well to charge a bank with the duty of exchanging currency for gold bullion and gold bullion for currency at a fixed rate, and in order to perform this duty the bank would have

to keep some gold in stock, since it would be liable to demands for gold for industrial use.

Secondly, and this is of much more practical importance, a stock of gold is still useful as a medium of exchange between different countries. Each country has its own currency, which circulates freely only within its own boundaries. Buying and selling and other commercial transactions take place between persons living in one country and persons living in another. Each party would naturally prefer to make his contracts in the money of his own country; but as this is impossible, either the one who is to receive money must accept money of the other country and exchange it subsequently into money of his own country, or the one who is to pay must exchange money of his own country into money of the foreign country. In either case the exchange must be made at some rate, which gives each currency a particular value in the other currencies, and this value is of course liable to variation. The value of a foreign gold-standard currency may be so low as to make those who have to take payment prefer to take gold at the par rate instead of taking the currency and trying to exchange it in the market. The central bank of the foreign country will then have to produce gold from its store either for the creditors themselves or for persons in its own country who find it cheaper to pay them in gold.

And, perhaps unexpectedly, we find that the central banks of countries not on the gold standard also find it desirable to keep gold in stock. It is

true that they are not bound to give gold for currency at a fixed rate, but they often find it profitable to buy and sell gold at the market rate.

Now in its effects on the value of gold (and consequently on the value of gold-standard money) the demand of the central banks does not differ from other demands for gold. The fact is apt to be overlooked by those who have been imposed upon by the common habit of talking of gold having " flowed " into a central bank as if it were water from a burst pipe, and having been " lost " by a central bank as if it had been removed by bandits. In reality, of course, central banks do not get gold without giving its value in exchange for it, nor part with gold without getting its value in exchange for it.

Like ordinary people, the central banks buy gold with money and sell it for money, and how much of any particular money an ounce of gold will be worth will depend on the general purchasing power of the money in question as well as on the purchasing power of gold. Consequently, when a country is on the gold standard, and its central bank is bound to offer to buy gold at a legally fixed price, it will acquire gold (gold, as the phrase is, will " flow into it ") only if that price in money will buy at least as much of commodities and services in general as the price that any other bank or person is offering. So, too, the bank will be asked to sell gold when its fixed selling price in money will not buy as much in commodities and services as can be obtained elsewhere in exchange for the gold. It follows from this that at any moment the central bank of the

country of which the fixed price for gold has the largest purchasing power will be the effective demander of gold, and that it will demand it in just the same way as ordinary persons and institutions demand it, and with the same result of tending to raise its value.

The central banks of countries not on the gold standard even more obviously tend to raise the value of gold by any demand they make on the stock. They are in just the same position as ordinary persons.

This demand of the central banks is, so far, not at all a satisfactory feature of the world's monetary system. Throughout good and bad times alike it is largely governed by legislation founded either on erroneous theories or on obsolete rules of thumb prescribing certain fixed amounts or ratios of gold to be held as "cover" or "reserve" against notes issued or even against notes and other liabilities. The general tendency of these regulations is to increase greatly the amount held by the central banks without making them as sound as they might with a smaller amount and greater freedom to use it.

§ 3. *The Supply of Gold.*

The supply side of the problem of the value of the precious metals is no more anomalous than the demand side.

Gold and silver are produced like other things, because the producers want to get money. But it is just as true here as elsewhere that people only want money in order to buy other things with it,

so that their real aim is the acquisition of these other things and services. Thus, though they produce gold in exchange for money, which may be gold, or based on gold, they are really exchanging it for other commodities and services. There is nothing mysterious about the way gold comes from the sources of supply into the hands of the people, either as currency or as other things made of gold. It is exchanged for commodities and services just like coal or any other mineral. The workers earn bread and meat and other things by their labour in producing it just like workers in other industries. The owners of the machinery employed obtain profits and with these profits buy the things which they want in just the same way as the owners of machinery employed in other ways. The owners of the mines or other sources of supply sometimes live in luxury in Park Lane and sometimes starve in Soho or on unproductive and unhealthy diggings, but all that they do get is got in the same way—by exchange of gold for money which is immediately paid away for other commodities and services—these being the real thing ultimately got in exchange. Every ounce of gold coming into the commercial world is exchanged for—"sold," if we may turn the word round to signify its converse—for commodities and services other than gold, and when plentiful in relation to them, it will tend to be of smaller value—will be cheaper—than when it is less plentiful. The truth of this is illustrated by the high prices of commodities and services in newly discovered or inaccessible gold-producing areas. In an area in which

gold has only just been discovered gold will be of small value (general prices in gold-standard money will be high) because it is plentiful there in comparison with commodities which have to be brought there, and with services which have to be performed by persons brought there: if the area is easily accessible, this will only be temporary, for the high prices and earnings will speedily attract commodities and workers. But if the area is and continues to be difficult of access from the rest of the world, like the Australian gold-field of the eighteen-fifties, and the Transvaal and the Yukon later, the value of gold will remain lower (general prices in gold-standard money will remain higher) there than in the old-settled thickly peopled parts of the world because the supply of commodities and workers to the area will remain restricted by the cost of getting them there. If anyone doubts this explanation he has only to ask himself whether he believes that if gold-fields like those of Australia and the Yukon had been discovered in Yorkshire or on the banks of the Rhine or the Hudson, there would have been any long continuance of much higher prices in the immediate neighbourhood than in the rest of the world. Obviously there would not, and the reason would be that the services and commodities would soon be present in sufficient quantities to equalize matters.

When gold-mining was carried on in as speculative a manner as it was till quite recent times, people were tempted to think that cost of production had little or nothing to do with the value of gold. But now we hear perpetually of extension and con-

traction of mining operations being due to changes in working costs. We are sometimes told that gold is unlike other commodities in the fact that the stock is so large in comparison with the annual output, and this is put forward to justify regarding the value of gold as being not affected by the cost of production like that of other commodities. But there are other commodities besides the precious metals, for example, houses, of which the stock is large in proportion to the annual output, and no one thinks of suggesting that cost of production does not play its usual part in relation to these. Producers of gold sometimes reap large profits and sometimes small profits, and so do producers of houses. A largely increased demand for gold cannot be satisfied rapidly, neither can a largely increased demand for houses. Double the output of plums in any one year, and you will enormously reduce the value of plums: double the annual output of gold or houses and you will produce nothing like as much effect.

### § 4. *The Effects of Anticipation on the Value of Money.*

Anticipation, correct and incorrect, plays the same part in regard to the value of gold and money as in regard to that of other things. The terms on which people exchange things depend not on what is, but on what the exchangers believe. About the present they are often misinformed, but their mistakes soon appear and mostly cancel each other; about the future they can only speculate, some time

must elapse before the truth appears, and the mistakes are often mostly in one direction so that they do not cancel each other.

Now the price of a thing at any moment is constantly influenced by anticipations of what the demand for and the supply of the thing is going to be in the future, and the more durable the thing is, the more important are the effects of these anticipations likely to be. Thus plums were not a penny cheaper in the summer of 1918 because next year's crop was universally expected to be much larger. But when anyone is in search of a house, not to rent for a short time but to buy for good and all, he finds himself immediately in contact with the owner's views about the demand for and supply of houses next year and many years after that. If there is general agreement that the demand for houses will be good and the supply poor for many years, the value of houses will be higher than if the contrary is the case, whatever the present quantity of houses and whatever the present desire of persons for house-room and whatever their number and their means to pay for what they desire may be. It is just the same with gold as with houses, except that there is perhaps a little more probability of general error in one direction or the other in consequence of the widespread impression that gold is invariable in value. In considering whether to buy iron or any non-precious metal, and even a precious metal which is not the standard metal, men will think of the future demand for and supply of that particular metal, because they believe that these factors will

settle its future price: but they will not think at all about the future value of the money they are going to give for the iron. Estimates of the future value of money, if made at all, are made quite unconsciously in the estimates which are formed of the likelihood of a general rise or fall of prices. If people think there is going to be a general rise of prices they think—without knowing it—that money if going to fall in value, and act accordingly. Their joint judgment is more likely to be wrong than their joint judgment about iron or tin or houses because they do not take the particular circumstances affecting the commodity into consideration. This is perhaps the explanation of the fact that at one period, for no definite discoverable reason, people generally overestimate the prices of the future and therefore cause a boom in the prices of the present with the result of subsequent fall and depression.

Whatever the cause of a boom, the high prices which mark it are synonymous with a low value of money, which seems in strange contradiction with the ordinary view that in a boom "everyone wants money." But the contradiction disappears if we bethink ourselves what everyone wants the money for: it is to buy commodities and services in hopes of making a profit because "things are going up." People may want money, but they only want it because they want commodities and services; the fact that commodities are supposed to be going up makes it desirable to lay money out on them at once: if the money is kept, it will not buy so much. The pressure is not to add to money stocks

by selling, but to deplete the stocks of money by buying as far as can be done without too great inconvenience and risk. Individuals and banks will try their hardest to carry on with the smallest possible stocks of cash, when money is the one important thing which they do not expect to rise in value.

Thus, even if everyone always paid in cash for everything immediately on receiving it, a preponderance of expectation of higher general prices (lower value of money) in the future would to some extent raise general prices (lower the value of money) in the present. But people do not always pay on delivery: they frequently induce the seller to let them have the goods on condition that they will pay some time (in all important cases at some definite time) after delivery. The seller then gives the goods for nothing at the moment because he contracts to receive a certain agreed sum of money at the agreed future date. The buyer of the goods contracts to deliver this money at the future date. If both buyers and sellers are influenced by some wave of sentiment which makes them believe prices will go higher, the prices at which these contracts are concluded will be higher, whether there is any justification for the belief or not.

History shows that war raises prices, which in gold standard countries means that it lowers the value of gold, and this seems very surprising to those who regard gold as the sinews of war. If it is the sinews of war, they think, it should rise, not fall; all belligerents seem to want money very

badly, and gold is the best kind of money and that which they seem to want most. But all this is fallacious; money is not the sinews of war, and what the belligerents want is not money but various things which they hope money will buy. In their hurry to get munitions they are ready to pay away all the money they can acquire by taxes or by promising to pay money (with interest and very likely a premium) at some future date. Far from prizing money more than usual in comparison with commodities and services, they shovel out money and promises to pay money with far less reluctance than in times of peace. As for the special utility of gold, that metal is one of the few which are of no direct use for military purposes. A belligerent may sometimes think it useful to parade a large stock of it, because owing to the erroneous beliefs of the public this may comfort his subjects and disturb his enemies; but, if clever and unscrupulous, he will arrange that very little of the apparent stock is real gold. Nearly every belligerent scrapes together every atom of gold he can get from the currency and elsewhere and sends it into neutral countries to purchase the things which he wants so much more. Hence it is perfectly natural that gold should lose value and that the general level of prices should rise in the countries which have and retain a money system in which the unit of account is equivalent to a quantity of gold bullion.

Thus the conclusion to which this section of our inquiry has led us is that where the unit of account in money reckonings is either a fixed quantity of

*free metal (e.g. gold) or a coin equivalent to such a* quantity, the value of money (and therefore the general level of prices) depends on the value of the metal, which is determined in the same way as that of other commodities by the same kinds of influences acting on demand and supply.

## CHAPTER III

# COINED MONEY

§ 1. *Seignorage.*

So much for the simplest monetary system, in which the unit of account is literally or in effect a definite weight of a certain metal. The system which can be most conveniently taken next is that in which the unit of account is still a coin, but a coin the value of which is not indeed wholly divorced, but is to some extent separated, from the value of the bullion of which it is made.

The coinage of a particular metal may be " free," in the sense that anyone may insist on having any amount of that metal coined for him by the Mint, without being gratuitous or done without charge. After all, we may reflect, coin is a manufactured article, and why should it alone be manufactured for nothing ? Why should not people who want coin pay for the cost of making it up as well as for the raw material, just as they pay for the making of flour into bread and the making of white paper into a printed book ? Where coinage is gratuitous, it is always paid for out of Government revenues, because Government is the only agency which will do it for nothing. If private enterprise takes up the

business (a thing not altogether unknown [1]) it will certainly leave the demand for coin unsatisfied till coin is enough above the raw material in value to make it worth while to manufacture it. The Government might act, and sometimes has acted, on the same principle, and make the same charge for coining that private enterprise might be supposed likely to make if under ordinary competition.

Further, the manufacture is one very strictly monopolized; perhaps no other monopoly has ever been protected by such draconian penalties as the monopoly of coining. What is there to prevent governments from charging considerably more than the mere cost of coining? Something was exacted under the name of "seignorage" by the seigneurs or lords who exercised the right of coining in medieval times, and doubtless they would have made the percentage much higher if their monopoly had been secure from the introduction of foreign coins into their territory. Modern governments could probably charge more with safety, but have been restrained from making heavy charges and sometimes from making any at all by the reason naïvely suggested by the preamble of the statute 18 Car. II, c. 5, which established gratuitous coinage in England, "An Act for the Encouragement of Coinage." This runs: "Whereas it is obvious that the plenty of current coins of gold and silver of this kingdom is of great advantage to trade and commerce."

The effect of a charge for coining is to tend to

[1] For a fairly modern example, see *Quarterly Journal of Economics*, August, 1917, pp. 600–34.

raise the ordinary value of the coin above that of the uncoined metal by the amount of the charge, just as any cost in the manufacture of any other article ordinarily raises its price by a corresponding amount above the value of the raw material. It restricts the production until the manufactured article is sufficiently above the value of the raw material to make the manufacture pay. So, if before 1914 our Mint had coined all gold brought to it, but charged 5 per cent, anyone who brought enough gold to make 100 sovereigns would only have got 95 sovereigns in exchange for it, and in consequence no one would have brought gold to the Mint so long as he could get more than 95 sovereigns—£95—for that amount of gold elsewhere. Whenever it was worth while to get gold minted it would have been because the market price of gold was only £95 for the quantity out of which 100 sovereigns were made, and when the price of gold was at that level it would have meant that 95 sovereigns—£95—would buy enough gold to make 100 sovereigns, so that the sovereign would be worth $\frac{100}{95}$ of the gold of which it is made, or to put it in other words, that the coin would be worth one-nineteenth more than the gold in it.

It could not be more than this for any appreciable time when coinage was "free," i.e. anyone could bring as much gold as he pleased to the Mint and have it coined on paying the charge. So if the demand for coin were to increase rapidly, it would be met by a greater supply. On the other hand, the value of the sovereign might easily have fallen below

a hundred ninety-fifths of the gold in it for a period of some duration, owing to decrease of demand: new coinage would not take place in this period. The value could not in any case fall below that of the gold in the sovereign where the possibility existed of turning the coin into uncoined gold by the simple process of melting. So the effect of seignorage is to keep the value of the coin always between the metallic value and that value *plus* the seignorage, and in progressive and even in stationary periods to keep it at the higher end of this limited space.

We must be careful not to be confused by changes in the mere form of the transaction. For a person to take raw material to a manufacturer to be made up for himself, and remunerate the manufacturer either by letting him keep a part of the product or by paying him money for the service rendered, was once a common method, but is now obsolete, surviving even at Government mints, if at all, only in name. Gold producers do not now bring or send their gold to a mint and receive back the same gold less seignorage and other charges, if any, but sell their gold to the mint (or a bank which acts as its agent) for money paid to them, and they regard themselves, like other producers, as receiving a price for their product. So there are "mint prices," prices given by the mint for gold, and when a seignorage is exacted, it appears in the form of a difference between the mint price of an ounce of gold and the amount of coin made out of an ounce. When, for example, the mint price of an ounce of "standard" (i.e. $\frac{11}{12}$ pure) gold was £3 17*s.* 10½*d.*

or £3·894, and that ounce was coined into £3·894 sovereigns, that shows an absence of seignorage: a seignorage would have been introduced by the interposition of a gap between the mint price and the amount of coin made out of the ounce, e.g. a lowering of the mint price to £3·75 per oz., while the ounce continued to be made into 3·894 sovereigns, would have yielded the Government a gross seignorage of £0·144, or 2*s.* 10½*d.* per oz.

On the value, measured in commodities in general, of the metal of which the coin is made, seignorage has no influence except in so far as it tends to reduce the demand for that metal by diminishing the quantity taken up by the currency, and this may be taken as a practically negligible effect when seignorage in only a single country is being considered. We need, therefore, scarcely encumber the exposition by making an allowance for the tendency of seignorage to depress the value of bullion: the matter is too trifling to be worth bringing into account.

As seignorage is seldom or never large, and as for the most part it simply raises the value of the coin once for all and then allows it to fluctuate very nearly with, though a little above, the value of the bullion contents of the coin, we may regard it as of little practical importance, but it may be of considerable use in enabling us to understand the effects of limitation in general.

§ 2. *Limitation applied to Subsidiary Coins.*

When the fact is once grasped that it is limitation

of supply, coupled of course with sufficiency of demand, which enables a seignorage to keep the value of the coin ordinarily above the value of the metal of which it is composed by the amount of the seignorage, the way is opened for comprehension of the fact that by a "closing of the mint to free coinage," and coining only suitable amounts, coins made of one metal may be made to circulate at some value fixed by reference to coins made of another metal.

This was first discovered in consequence of the very reasonable desire in every country to keep coins made of two different metals, gold and silver, both in circulation at the same time, gold being convenient for larger and silver for smaller payments, though not for the smallest of all. So long as they attempted to maintain free coinage of both metals, governments were in perpetual difficulties arising from the fact that the ratios which each of them prescribed between their gold coins and their silver coins always sooner or later led to one or the other metal being not supplied in sufficient quantities for the requirements of a convenient currency.

With regard to copper coins the principle was acted on long before it was recognized or understood, and long before it was acted on with regard to silver. Money of small denomination was demanded, Government did not supply the need, and, as usual, private enterprise stepped in. The story in this country is roughly that tradesmen took to issuing metal "tokens" for small fractions of

the unit of account such as pennies or farthings when the Government did not coin them, these tokens entitling the holder to goods of that value at the shop of the tradesman. They were not always retained for further purchases by the customer who received them in change, but got into circulation, i.e. they were generally acceptable, so that things could be bought with them from other people as well as from the tradesman who issued them, although the metal of which they were made was not and did not profess to be of appreciable value. Abuses of course soon made their appearance, and the business of providing these " token coins " was taken over by the Government. They were manufactured by or for the Government and given in exchange for larger money paid by people who wanted the small for purposes of their business. There was no " free " coinage. The metallic value of the coins was considerably less than that at which they circulated without the least difficulty, but some importance was attached to it, and no one seems to have understood that their value was given to them by the demand coupled with the limitation of supply enforced by their being sold to the public at the rate of 960 farthings, 480 halfpence and 240 pennies to the pound sterling.

Even when the whole coinage was remodelled in 1816 no one seems to have thought of applying the same simple plan to the silver coinage, but it was actually applied in consequence of what seems to have been merely a happy accident. It was intended to continue " free " coinage of silver, but to

make it, as Adam Smith had recommended forty years before, subject to a seignorage of 4*s*. per lb. troy weight (the Mint price being fixed at 62*s*. for the lb., which was coined into 66*s*.). But for some reason or other free coinage was only to begin after the issue of a proclamation about it, and the issue of this proclamation was delayed. Meantime the Mint bought silver at the market price, coined it, and sold the coins to those who wanted them at the rates of 8 half-crowns, 20 shillings and so on to the pound. This method being found profitable to the Mint and satisfactory to everyone else, no one troubled about the proclamation, and it was never issued. It was only in 1870 that the provision for free coinage after the issue of the proclamation was struck out of the statute-book, and even then the importance of the change made by the disappearance of free coinage of silver does not seem to have been recognized. The usual belief seems to have been the very extraordinary one that the silver coins were kept in their proper relation to the sovereign by not being legal tender for more than £2, as if a disability of this kind could possibly have either kept the value of the coin above that of the metal of which it was composed or have kept it in circulation if the value of the metal was greater than the value at which the coin would circulate. The fact that silver coins are legal tender up to and not beyond £2 and that bronze coins are legal tender up to and not beyond £0·05 (a shilling) is of no importance whatever except in so far as it prevents a spiteful debtor from playing an occasional " nasty

trick " on his creditor by paying him a large sum in these coins.[1] If they had not been legal tender at all under the law of 1816, they would have been generally accepted just as much as they are. If they had been legal tender for any amount, they would not have been tendered for large amounts any more than they are: in fact silver is seldom tendered for amounts above 9*s.* 11½*d.*, which is less than a quarter of the legal maximum, and bronze is seldom tendered for sums above 5½*d.*, which is less than half the legal maximum.

The law of legal tender has nothing to do with the value of the silver and the bronze coins. They are maintained at the fixed ratios, 20 shillings, and so on, to the pound sterling simply by sufficiency of demand coupled with adequate limitation of supply. When there is a demand for a thing it will have a value until the supply becomes great enough to reduce its marginal utility to nil: what value it will have depends, given the particular elasticity of the demand, upon the magnitude of the supply. The value of the silver and bronze coins of the United Kingdom is kept at the intended ratio because the Government, exercising an absolute monopoly of the manufacture of the only known convenient media of exchange for small transactions, metallic coins, supplies them only in the limited quantity appropriate to that ratio.

To make this quite clear we need only con-

[1] But John Leech's bus conductor who gave the tiresome old lady 4*s.* 10*d.* in coppers was quite within his rights. She should have tendered 2*d.*, not asked for change for a five-shilling piece.

sider what would have been the result of insufficient demand or excessive supply.

First, what would have happened if at some period the demand had fallen off, and that faster than the coin is consumed by abrasion and loss? Suppose a plague which carried off half the population, or an ingenious improvement which led to the substitution of some system of making small payments without the use of coin. In that case some persons or institutions, probably the banks, would have found themselves in possession of inconvenient amounts of silver and bronze coins—more than they could pay out without annoying the persons with whom they did business. The probability is that they would insist on the Mint taking back some of the coins at the ratio at which they were issued; but if the Government obdurately refused, and the falling off in demand was large and expected to continue, the coins would go to a discount, i.e. for the sake of exchanging them for more convenient money people would be willing to submit to some loss on their nominal value, and they would be exchanged for the more convenient currency at something below the official ratio.

Secondly, suppose excessive supply. In order to placate some school of currency theorists, or in order simply to make more profit, the Government is not content with issuing silver or bronze coins when they are asked for by persons ready to pay the price, but proceeds to put much larger quantities out by the device of ordering Government wages and postal money orders in sums up to £2 to be paid entirely in silver.

The same results will follow as in case of a falling off of demand—there will be too much silver coin somewhere, and if the excess cannot be returned to the Mint at par the coin will eventually go to a discount. Additions to the supply made by illicit coinage will of course have exactly the same effects as additions made by the Mint, and where Government was very weak or inefficient, they might be on a sufficiently large scale to replace the usual Government supply and exceed the appropriate amount, with the same result of bringing down the value of the coin, and this would go on until the value became so low that it would not pay the illicit manufacturers to produce enough to bring it still lower. The actual danger from illicit coinage does not appear to be great, owing to the fact that coinage on a large scale cannot be concealed, and concealed coinage on a small scale is not a very remunerative manufacture, even when the cost of the raw material is very small compared with that of the finished article.[1]

In fact the system has been perfectly successful, not only in this country, but wherever it has been tried. Some countries have made a slight improvement on the English system by making the silver coin redeemable or " convertible " at their mints or

[1] It is desirable that the coins should be of such a character that successful imitation is impossible without the use of bulky and easily detected machinery. Silver as the material does not seem to have much merit in this respect, and when tradition in its favour weakens, it may be superseded by some other metal or combination of metals. We may also expect that the plan of giving each bank-note a number of its own, which greatly hinders the operations of note-forgers, may be applied to coins.

Government banks. This means that the Government is not only ready to sell the coin at the prescribed ratio, but is also ready to buy it back at that ratio. Thus the possibility of a falling off of demand is provided for, and no doubt that is desirable. In this country there is little doubt that in case of a considerable falling off of demand the Government would be compelled to take back enough of the coin to keep up its value,[1] and the obligation might just as well be acknowledged at once.

If the value of the metallic contents of a coin of this kind is not originally very much below the value fixed for the coin, the particular arrangement made will perish in the event of a considerable rise in the market price of the metal of which the coin is made. This will happen because the metallic contents of the coin will then be worth more than the value at which the coin is rated and circulates, and the cheapest source of supply to anyone who wants the metal for industrial purposes will be the coinage. Thus if silver went up to more than 66*d*. the oz. troy, instead of buying silver in the bullion market manufacturers of silver goods in this country and elsewhere would as far as possible get what they wanted by melting English silver coins, which as coins are only worth 66*d*. the oz. troy, and which they could therefore get at that price in small quantities, and at a very little more than that price in large quantities. The silver coinage would disappear, and everyone

[1] This was written in 1918. From 1921 to 1924 large withdrawals of silver coins were made at the expense of Mint profits and the Currency Note Account.

would be inconvenienced till some substitute equally good was discovered: in some countries this inconvenience has actually occurred. The way to prevent it is for the Government to take time by the forelock and issue a lower weighted (or more alloyed) silver coinage before the depletion of the coinage begins, and to draw in as fast as possible the old heavier (or purer) coin. If this is done sufficiently promptly a balance of silver will remain in the hands of the Government and no one will be hurt.[1]

There is no necessity for a whole series of coins of this character to contain the same proportion of metal to their coin value, and it is often convenient that they should not. This was recognized when, to make them more portable, our pennies were made less than double the weight of the half-pennies, and the principle might well be applied to coins of higher denomination. The threepenny piece is too small and the five-shilling piece and the American dollar are too heavy and bulky.

### § 3. *Limitation applied to Principal Coins.*

Towards the end of the nineteenth century the principle that sufficiency of demand and properly limited supply will keep the value of a coin above that of its metallic contents was applied in several parts of the world, of which India was the most

[1] After this paragraph was written the price of silver rose so greatly as to threaten the disappearance of the British silver coins, and in the session of 1920 Parliament authorized the issue of silver coins alloyed 50 per cent in place of the traditional 7½ per cent.

important, to coins which were not subsidiary but formed the principal currency of the area.

The Indian Government was troubled in various ways, unnecessary to describe, by the change in the ratio of value between gold and silver. The standard was silver, and a silver coin, the rupee, was the unit of account. The ratio of value which had prevailed for a long time between the value of gold and silver in the markets of the world made the value of the rupee to the gold sovereign or pound sterling about 10 to 1, so that in ordinary language in England the rupee was said to be about 2*s.*, while in India the pound was said to be 10 rupees. But the ratio was rapidly changing, so that it was said in England that the rupee was falling, and in India that the pound was rising. The Indian Government wished to stop this movement, and also to link up India with the Western world, in which the gold standard was predominant. After some resistance on the part of the British Government, it was allowed to adopt a scheme under which the supply of rupees to the currency was to be so restricted as to keep their value up to the ratio of 15 to the £1. The possibility of the ratio between silver and gold varying again so as to make the metallic contents of the rupee equal to more than one-fifteenth of £1 was recognized, but was not regarded as an objection, inasmuch as one of the objects of the change was to keep the rupee higher than it otherwise would be. If the value of silver measured in gold went up enough to make the silver in 15 rupees worth more than £1 the new system would simply disappear

because no longer necessary. There would be no melting down of the silver coinage, as there would in similar circumstances in England, because there would be no gold currency in the way to prevent the coined rupee rising in value along with silver.

Some of the older economists and financiers of the time said the scheme could not possibly work, and were greatly pleased when their prophecies seemed to be justified by the failure of the rupee to stand immediately at the intended rate. But this was only the natural consequence of insufficiency of demand: the demand was not at first big enough to make the mere stoppage of new coinage bring the value up to the ratio. Soon, however, demand increased, and gradually increased enough to overcome the counteracting effect of some new supply in the shape of rupees which were outside India and now came back because they were worth more there than outside: the rupee rose in relation to gold so that merchants in India and England were able to do business approximately at the ratio of 15 rupees to the £1, and the Indian Government could pay approximately £1 due from it with 15 rupees.[1]

The rupee consequently came to be one-fifteenth of a pound just for the same reason as the English shilling is one-twentieth of a pound—there was a sufficient demand for it and not too much supply. The difference was that in India there was no gold sovereign in circulation, so that the ratio fixed for

[1] The war of 1914–18 and the fall in the value of gold as measured in silver resulted eventually in the ratio being refixed at 13⅓ rupees to £1 at which it now (1934) stands.

the rupee was not with a domestic coin but with the unit of account of another country, and could therefore only be seen at work in the business transactions between the two countries, commonly called the exchanges. Hence the name "gold-exchange standard" applied to the monetary system of India and other countries with silver currencies kept to the standard of gold.[1] But we must beware of imagining any natural pre-eminence of gold over silver. The same system might be applied with equal ease to keeping the value of a gold coin at some fixed ratio with the value of the silver coin of another country, or indeed with the value of any other clearly cognizable commodity, or even with a collection of commodities such as appears in the formation of an index number of prices. The Swedish Government came near adopting a plan of this kind in 1916, when it put hindrances in the way of the entry of new gold; but the object to be aimed at was not properly understood, and the manufacture of paper substitutes for coin was not adequately limited, so that the experiment proved completely abortive, the value of the Swedish currency eventually falling not only down to but considerably below its original parity with gold. (See Gustav Cassel, *Money and Foreign Exchange after 1914*, pp. 79–100.)

The conclusion of this section is that, given demand for a coin, adequate restriction of supply will keep

[1] England being (1935) no longer on the gold standard, and the rupee being still kept at a fixed ratio with the pound sterling, the name gold exchange standard has ceased to be appropriate, and has been superseded by the term "exchange standard" simply.

its value up to any required level above that of its metallic contents. It is not, of course, a useful corollary of this to say that adequate *additions* to supply would keep its value down to any required level *below* that of its metallic contents: that is perfectly true, but adequate additions cannot be made, because a coin worth less as a coin than the bullion of which it is made will always, law or no law, ultimately be melted to be turned into something else. Consequently, where the unit of account is a coin regulated in supply, the value of money is never lower for long, though it is ordinarily higher than it would be under free and gratuitous coinage. How much higher depends on the particular standard of restriction adopted: it may be higher by a given percentage; it may be higher by the amount necessary to make it conform with the variations of some other money, as the Indian rupee was kept higher by the amount necessary to make it one-fifteenth of £1; or it may be kept as much higher as the restricting authority judges desirable by some rough estimate, or as much higher as will preserve stability of value as indicated by some index number of prices.

It is no objection to this conclusion to say that the value of a coin restricted in supply may be reduced by the competition of paper currency. That is merely one of the numerous things which tend to reduce the demand for the coin, and may make the demand insufficient to keep its value over that of its bullion contents. The case will come under notice again in the course of the argument of the next chapter.

CHAPTER IV

# PRINTED PAPER MONEY

## § 1. *Why Bank-Notes are acceptable Currency.*

IN modern times metal discs stamped with certain designs and lettering are not the only things with which people buy and for which they sell. They also use scraps of paper on which are figures or words (or both for safety) indicating amounts of the unit of account, for example, "£1," "Ten shillings" (which is half a pound sterling). There is usually other reading matter on the scraps, but it is not commonly read or regarded as of any more importance than (what is to most people quite unintelligible) the "DEI GRA: BRITT: OMN: REX FID: DEF: IND: IMP:" round the King's head on our coins. Provided the paper will be taken for the amount printed conspicuously on its face, wherever we are likely to offer it, we do not trouble ourselves whether, like a bank-note, it carries the promise of some person or institution to pay that sum at a particular place on demand (*scil.* in business hours), or, like a currency note of 1914–28, says that it is legal tender (i.e. that we can compel anyone to whom we owe the sum to choose between accepting the paper in discharge of the debt and going without payment altogether).

If metallic tokens are accepted at rates far above the value of the metal contained in them because they are stamped with particular designs and letters, it is not very surprising that paper tokens are accepted at rates far above the negligible value of the paper because that paper has particular words or numbers printed on it. In its main outline the history of these paper tokens has some resemblance to the history of metallic tokens. Like the metal tokens, they were originally issued as promises of individuals to pay money, and in more modern times they have gradually become, like the token coins, mere counters for which the national governments take the virtual responsibility, though they are still for the most part nominally issued by the institutions called banks which have taken the place of the old individual bankers.

Exactly how bank-notes first got into circulation along with coins in various countries and at different times is an interesting historical question well worth studying. Here, however, it is only necessary to point out that to keep a large amount of money in coin is to keep a bulky article which offers peculiar attraction to thieves on account of its retaining its value although it has lost its form so that it cannot be identified. It is natural that any man who has no convenient strong-room will wish to deposit any considerable sum in some safe place and take a receipt for it; as one good coin is as good as another, he will not ask the person with whom he deposits the coin to promise to give him back the actual coins deposited—a promise to pay " the sum "

deposited will suffice. Provided the written promise is in such a form that handing it over will transfer the owner's claim on the person who has the coin to the new holder, it is evident that when the owner wants to make a large payment he will do well to hand over the promise instead of fetching out the coin from deposit, and the person whom he is paying will do well to accept it. It will clearly be convenient in view of such possibilities that the person with whom the coin is deposited should make out his promises to pay in round sums—£20, £100, and so on—so that several may be pieced together to make up any particular payment. When this is done, the promises or " notes " pass from hand to hand easily, become generally acceptable, are " paper currency." There is a demand for them because they are more convenient for keeping and paying large sums than gold, and still more than silver. They can be more easily stored and carried: each one is identifiable by its date and number and so less attractive to thieves than coin. True, they are more easily destroyed by fire, but the honest issuer does not take advantage of that accident.

Moreover, at the time when bank-notes were introduced coinages were in a very bad state. Base coin was common and good coins were liable to be much clipped without immediately being rejected by the next person to whom they were offered. All sorts of good and bad foreign coins found their way into each country, so that the inexpert person never knew what he would actually get if he accepted say £50 or £100 tendered to him by a buyer or a

debtor, and even an expert would take some time examining, weighing, and perhaps assaying some of the coins. This fact must have considerably increased the readiness of persons who had to receive a large payment to accept the note of a reputable expert for a given sum instead of a bag of coins likely to give so much trouble and anxiety.

There is, of course, no difficulty about the supply of the notes. The person who "issues" the notes makes his profit by lending out most of the coin deposited, knowing full well that it is vastly improbable that many of the note-holders will all at once want to exchange this new currency for the old, heavy, bulky and inconvenient coins. Bold competitors will start in the business: on the strength of a little capital, or the pretence of a capital, they will issue notes by way of loan to borrowers without waiting for deposits, and the demand is soon fully supplied.

In some such ways redeemable notes get into circulation.

At this stage it is natural and usual to say that the notes owe the fact that they circulate to the fact that the issuers must redeem them if required. But something more than redeemability is required to make them circulate; when a note is redeemed it is at the end of its circulation, and what we want to know is rather why notes are not presented for redemption at once instead of circulating. They are kept circulating not because they are redeemable, but because other people than the issuer will take them. That is, because they are convenient to keep

in hand in order to make future payments with; there is, in fact, a demand for this kind of medium of exchange, so that people like to have it in preference to an equal amount of coin.

That redeemability, or "convertibility" as it is commonly called, is not essential, for acceptability is shown by the fact that notes which the issuers will not in fact redeem and which are therefore called "inconvertible" notes do in fact often circulate.

When notes have got into circulation as convertible notes and people have become thoroughly accustomed to accept them and to find them acceptable by others, their convertibility may sometimes be taken away without destroying this general acceptability of the notes and the consequent demand for them. Of course, if the public receive a rude shock by being told that such and such a bank is insolvent and its assets will not be sufficient to pay its notes in full, the notes will cease to be acceptable. But some less disquieting explanation may be given for "the suspension" of convertibility. If the Bank of England in 1797 had taken pains to make it known all over the country that it could not continue to pay gold coin for its notes on account of the insufficiency of its resources, and that it did not think it could ever resume the practice, the notes would have ceased to be generally acceptable and consequently ceased to circulate and lost their value at one blow. But instead of doing that the Bank directors went to the Government and secured the passing of a law restraining them from redeeming their notes. The public thought little of this:

the notes loked just the same as before, and continued to be just as convenient, and everyone except Lord King some time afterwards went on taking them just as before. The demand for them was unaffected, and the supply for the moment continued just, or nearly, as much limited as before.

In some such way an already existing demand for a convertible note can be maintained when well-informed people, and even much larger numbers, know the note is no longer convertible. Demand and limitation of supply account for an obsolete blue Mauritius *2d.* stamp selling for a thousand pounds: why should they not also account for a convertible note retaining its old value even when it is no longer convertible? The Government of Mauritius certainly does not promise to redeem the stamp at that or any other value and never undertook to accept it as payment for postage for more than *2d.*, but a dealer will give £1,000 for it because he knows he can pass it on for more. He will not, it is true, give £1,000 for it if he can only sell it for that sum, while anyone selling five pounds' worth of goods in 1797 would take a £5 Bank of England note, although he could not expect to get more than £5 for it; but the difference is only the result of the demand for the five-pound note being a demand for currency, whereas the demand for the stamp is a demand for the satisfaction of collectomania.

Moreover, though it would be impossible for private individuals, separately or in association, to make a perfectly new issue of inconvertible notes without the assistance of Government, such an issue

can be made by or with the active help of even a rather weak Government. This is possible partly because the public has been accustomed to regard the note currency as more or less arranged for by the Government, and therefore to look upon anything which is allowed to circulate as being " good " —it trusts the Government to do with notes what it does with coin, to see that nothing " bad " is in circulation—and partly because the Government assumes the power of interpreting the name of the unit of account. This power is commonly called the power of changing the law of legal tender. At one time, for example, gold coin may be the only legal tender ; then a contract to pay " one hundred pounds " can only be fulfilled (unless the other party agrees) by the tender of 100 sovereigns or 200 half-sovereigns. Government may then enact that notes issued by some bank or by its own Treasury shall be legal tender, and forthwith everyone who has contracted to pay " pounds " can pay in these notes. It is true that if the issue is very unpopular, the mere making of it legal tender will not bring it into general circulation, because people will find means for refusing to deal with those who insist on paying in it ; but the law certainly does help. The power of the holder of a note to make his creditor accept it in payment is not exactly the same thing as the note being generally acceptable, but it goes far to create general acceptability, since a person's reluctance to accept is largely overcome by the feeling that he can " pass the thing on." Governments have often been helped in getting their notes into circu-

lation by the fact that they have forbidden private persons to issue convertible notes for small denominations which would have been readily accepted if allowed. When desirous of issuing inconvertible notes themselves, they pay no attention to the arguments against small notes, and thus their issue satisfies a previously existing demand.

After this preface about the nature and origin of "paper currency" we come to the question, what effect it has on the value of the unit of account, or, in other words, on general prices.

§ 2. *The Effect of Note-issue on Prices.*

We must be careful not to fall into the mistake of imagining that because a note-issue circulates at a par with coin, as for example a five-pound Bank of England note before the war would readily exchange for five sovereigns, therefore everything in regard to the value of money and prices is just as it would be in the absence of the issue. To suppose that every issue has displaced an amount of coin equal to its own total amount less any reserve kept against it by the issuers is a mistake, since the greater lightness of notes leads to a much larger quantity of currency (coin plus notes) being kept on men's persons than if there are no notes. Nevertheless it is true that all or most note-issues do to some extent economize or "displace" coin, and thereby reduce the demand for it. We may certainly take it that the general tendency of note-issues, especially when the notes are for small sums and therefore compete with coin much more than with other machinery

for paying money, is to reduce the demand for coin, though they need not displace coin to their full amount.

Where the coin is restricted in issue and has a much higher value than its metallic contents, a note-issue, although it retains its par value in coin, may thus have a considerable influence upon the value of money, reckoned as it is in this restricted coin. For example, if at the time the Indian Government was bringing the rupee up to 1*s.* 4*d.* by restriction of coinage, either it or banks had been successful in issuing and keeping outstanding a large issue of notes (convertible or inconvertible) of small denomination, the rise of the rupee would have been greatly obstructed in consequence of the reduction in the demand for silver rupees. When the scheme had attained success such an issue might obviously have sent the rupee down again to the value of its metallic contents.

But that is not all. An issue, convertible or inconvertible, although circulating at par with the coin tends to reduce the value of the coin and raise prices even when that coin is, like the English sovereign before the war, always on a level with its metallic contents, or, like the Indian rupee in the case just imagined, has already been driven down to a level with its metallic contents. It does so even when the coin may be melted down and exported, because it tends to reduce the value of its metallic contents: the demand for coin being reduced, the demand for, and therefore the value of, uncoined bullion will be reduced, so that the meltability of

the coin will not altogether save it from being pulled down by the diminution of demand for it caused by the competition of the notes. This, however, though important in any large view of the subject, is negligible when the effect of a note-issue confined to any one country is concerned: the bullion of which the value is depressed is a commodity with a world-wide market, and therefore is not likely to be very appreciably affected by any probable single change in the demand for the coin of any one country.

At this point the power of a convertible issue to depress the value of money and raise prices stops, *provided the coin may be melted and it or bullion may be exported.* Money is still reckoned in a coin which is convertible into bullion, and therefore cannot go below its bullion value. The conditions of the supply of the convertible notes prevent the value of any of them from going below the value of the coin, and the coin cannot go below the value of its contents because the supply of it would then be reduced by melting.

That the supply of the convertible notes of any denomination cannot be so large as to cause a gap to appear between their value and that of the coin they promise to pay is so obvious as to scarcely need explanation. If there was such a gap, anyone who had one of the notes would run to the issuers to get it redeemed: the note by hypothesis is circulating at par: a pound note pays a pound debt and buys an article priced at a pound, and " the change " for it is twenty shillings, which all the arithmetic books

agree in making a pound. Any gap between it and sovereigns would therefore appear in the form of a sovereign being worth more than a pound, and if a *sovereign could be openly sold for more than* a pound, notes would be rushed in for redemption by holders anxious to make a profit, until parity was reached again, or all the notes paid off, or the issuers bankrupt and the notes out of circulation. Convertible notes thus cannot be kept outstanding in numbers which would lead to their being less in value than the coin they promise to pay, and *a fortiori* they cannot be issued in such numbers: it follows that no more can be put into circulation than will be compatible with their keeping their par value. The bankers may try to get more into circulation by paying all their own household bills with them; but if there are enough out already, this will only end in the tradesmen presenting the notes for redemption. It may have seemed to some banker who had the power of issuing notes that it would be a fine thing to encourage people to take his notes by offering them at a small discount; but he must have soon realized that this would cause an enormous demand for his notes, but that they would all be immediately presented for redemption so that more might be asked for, and he would be ruined by the discount. There is, in fact, no possibility of the convertible note being below the value of the coin which it promises, and therefore it cannot drag the value of money—the unit of account of money—below the value of the bullion contents of the coin, when that coin itself is protected by free converti-

bility into bullion from being so dragged down. *If* the freedom of owners to do what they *liked with* sovereigns which prevailed in England before the war had been maintained, the introduction of an issue of convertible one-pound notes (formerly forbidden) with only an ordinary reserve against them, would doubtless have tended to drag down the value of English money, i.e. of £1 and all multiples and fractions of £1, and therefore to raise prices. But it would only have brought the value of the pound down along with gold throughout the world and only have raised English prices along with prices in the world at large. And a lowering of the value of gold thus caused, though widespread, would be trifling.

An inconvertible issue has more power than a convertible of depressing the value of the unit of account and raising prices within the country where that unit is employed.

Inconvertible notes may circulate at the full value of the bullion contents of a coin indicated on their face and even at the full value of the coin when it is restricted so as to be worth more than its bullion contents. The testimony of history is conclusive on this, and the fact is easily explained by the ordinary principle of demand coupled with adequate limitation of supply. If the Government or other issuers are able to prevent the manufacture, or forgery as they would call it, of notes by other persons, and if they themselves do not give out or keep out more notes of each denomination than would have been issued and kept out if the notes had been

convertible, the issue cannot possible have any other value than that which a convertible issue would have had. Just as the convertible issue is kept up in value by the demand and adequate limitation of supply, so may the inconvertible be kept up.

But, though they need not be any greater in total than convertible notes, inconvertible notes may be so, and even when the coin is convertible into free bullion, they can be issued in sufficient amount to press the value of the unit of account down below that of the bullion contents of the coin or coins which formerly represented the unit of account. That this kind of thing has happened in past history is generally admitted; but when it happens, it is generally unperceived by the mass of the people and strenuously denied by many of those who ought to know. They are so accustomed to expect changes of the value of particular articles to be reflected in their money prices that they cannot understand general prices being higher because the measure of price has been changed.

Yet the process is really simple enough. The whole of some issues of notes and a part of most may be absorbed in increasing the stocks of currency held by persons and institutions. The British Government might have stored in vaults a sovereign for every Currency Note for £1 which it issued in 1914 to 1928, or private individuals might have been so pleased with the picture of the Houses of Parliament on the back of the notes, or so patriotic, that every pound-note issued was promptly framed and hung on front-parlour walls. Then no additional

buying of things would have taken place or been attempted in consequence of the issue. In the first of these two examples neither the British Government nor the people would have had a penny more to spend than before: in the second the Government certainly would have more to spend, but the people would have that much less, and the two together would have no more to spend than before.

But this is far from usual. A great part of almost every issue and sometimes the whole of it goes to increase the aggregate amount of money which people and Government together can and do spend on things and services. The notes are exchanged for something: the issuers buy things and services with them or lend or give them to others who do. They may, if a Government, go through the farce of giving them in exchange for other money and then spending that other money instead of spending them directly; but however the process may be disguised, it results in more money to spend and more money spent. The perfectly natural consequence is a rise of prices. As we have seen, where the notes are convertible into coin and the coin is convertible into free bullion, this rise of prices will not include a rise in the price of bullion, since the value of the coin and bullion must stand on a level. But inconvertible notes, not being subject to this "automatic check," may be issued in greater and ever greater quantities, so that they can cause a gap to appear between their value and that of the bullion to which, through the coin, they are nominally equal.

At first sight it is probable that most of us would

expect the gap to appear in the form of a note passing for less than its nominal value, say a pound-note passing for £0·8 or 16*s*. and a dollar-note for $0·80. This does not happen, and nothing really suggests that it should happen. The pound-note was, and continues to ordinary apprehension to remain, " a pound " : it will buy a thing priced in a shop-window at " £1," and it will pay a debt of £1. Failing the note going to a discount, we should perhaps expect the sovereign to " go to a premium," and begin to circulate at some value exceeding £1, say £1·25 or £1 5*s*. This might happen if people really preferred sovereigns to notes, and if they could shift the premium as fast as changes in the price of bullion took place; but in fact that could not be done: the currency value lags behind the bullion value, and consequently the coins are not kept in circulation at higher prices, but are " driven out," as it is usually said, by the notes. It is not really a case of their being driven out, but of their being attracted out into the bullion or export market by the premium obtainable there and not obtainable so long as they are used as currency. Jewellers and bullion dealers will give more for them in " money," that is, in notes, than they will fetch as currency, so that they " disappear," the heaviest going first, and the others following as the price of bullion rises.

Thus the increase of inconvertible notes when carried, as it can be, far enough, causes a rise of the price of bullion.

It has not till lately been well understood, even by experts, that when the coin is not convertible into

free bullion, convertible notes may be issued in quantities just as great as inconvertible notes and with exactly the same result. Ricardo came near hitting on the fact. He noticed that during the suspension of cash payments by the Bank of England it was a puzzle to many people how the inconvertible note could be of less value than the gold it should (through the gold coin) represent, although as a matter of fact, when they had a gold coin they found it would only circulate at the same rate as prevailed before the suspension of convertibility.[1] He explained the matter quite correctly as being the result of the legislation which prevented law-abiding people from doing what they liked with the coin: there were penalties against melting and exportation which kept the gold coins, so long as they were in the hands of law-abiding people, from being used for any purpose except currency, while *for that particular purpose*, as has just been shown, the coin cannot in practice be used at a value higher than that of the unit of account supposed to represent it. But Ricardo and subsequent writers regarded the point as of little importance, because it did not occur to them that a well-enforced denial of freedom to deal with coin would be sufficient by itself to allow over-issue to take place without the abolition of the convertibility of notes into coin. Recent experience has shown this to be perfectly possible. From August, 1914, to April, 1925, the British Treasury's £1 and 10*s*. Currency notes were legally convertible at the

[1] "The High Price of Bullion a proof of the Depreciation of Bank Notes" in Ricardo's *Works*, p. 280.

Bank of England, and as a matter of fact were converted for sufficiently insistent demanders who knew enough not to fail in the *vivâ voce* examination to which they were subjected. But during that period exportation had been made impossible, and the using of the coin for any purpose except currency was forbidden, so that the person who went to the Bank and received a sovereign might just as well have got a round disc of cardboard with " legal tender for £1 " on one side and Sir John Bradbury's head on the other, or better still, he might have stayed at home and spent his £1 note like other people. The Currency note could be converted into a full-weight coin, and was therefore described as convertible, but it was not convertible into free gold of the weight of the sovereign, since the sovereign could not be converted into free gold.

Thus convertibility of the note into coin is deprived of all its virtue when laws against melting and exportation of the coin are present and effective. Convertible notes can then be issued without check just like inconvertible notes, and consequently can drag down the value of money below that of the bullion contents of the coin and give rise to the same phenomenon, a rise of general prices including the price of bullion.

### § 3. *Excessive Expansion of Inconvertible Currencies.*

When the issuers of inconvertible notes or notes which are only convertible into inconvertible coin issue them so freely that they will exchange for less than the par amount of bullion, when, that is, in

other words, the price of bullion rises above the par price, so that the note will no longer buy as much bullion as is contained in the coin to which the note was intended to be equivalent, the unit of account ceases to be a coin or quantity of metal and becomes a printed token. The pound sterling, for example, in multiples and fractions of which all prices in this country are reckoned, ceases to be 113 grains of fine gold and becomes simply "£1" (or one-fifth of £5 and so on), when printed on a genuine note.

Trouble soon generally arises in consequence of the absence of recognition of the fact that if one "standard" by which the amount of currency has been regulated is abandoned, another ought to be put in its place. Hitherto the convertibility of the notes into gold bullion has limited their amount to that which could remain in circulation at the value laid down by the par rate. What is now to limit their amount?

History furnishes many striking examples of neglect to face this question having resulted in an excessive expanson of currency and a consequent inordinate and distressing rise of prices. Inconvertibility has usually been introduced to combat financial difficulties of the government or its bank, so that the very object of destroying convertibility is to remove the necessity the Government, or its bank, or both, are under of fulfilling their promises to pay something equivalent to certain definite quantities of bullion. In the present state of economic instruction in all countries there is no Government and no people which is likely to under-

stand what is happening. The issuers find that further issues themselves directly bring in money easily and apparently cheaply, and very likely at first greatly assist borrowing in other ways by the feeling of ease and prosperity which "plenty of money" at first creates. Many other persons profit enormously by the rise in the prices of the things they sell. So there is a strong bias in influential quarters in favour of more and more notes, which leads to many arguments in their favour.

1. At first, when the rise of prices is not yet very perceptible, it is usual to deny that general prices have risen. This contention soon disappears, as the issue goes on and prices rise further.

2. Next comes the contention that, though the general price-level has risen, the currency is still on a level with bullion—the price of bullion has not risen. This is untrue, but usually difficult to disprove, because the time is probably one of considerable confusion: transport may be interrupted by warlike operations so that the price at which gold may be bought from abroad is difficult to ascertain, and the issuers may have taken the precaution of forbidding free transactions in bullion at home. But soon this does not matter, because, as the issue goes on, the rise in the price of bullion becomes too great to be denied.

3. Sometimes it is contended that the rise in the price of bullion is due not to a depreciation of the money but to an appreciation of bullion. This covers two different contentions between which confusion is frequent:

(*a*) It may mean simply that bullion is higher in value relatively to commodities in general, while money has preserved its old relation to them. If the issue gets larger and larger, this too has to fade into the limbo of discarded arguments. But supposing it were true, it would only be by accidental coincidence, unless the issue of notes was managed with the distinct aim of securing a currency which would always keep the same level of value and preserve a complete stability of general prices. Regulation with this end in view is quite conceivable, and has often been advocated by high authority. It must be noticed, however, that those who put forward this defence of an actual issue are often persons who would be the loudest in their protests against the desirability of the adoption of any scheme for such regulation.

(*b*) The other meaning of the contention, that it is not money which has depreciated but bullion which has appreciated, is that the gap between the value of bullion and that of the unit of account and also the general rise of prices are to be ascribed to something that has happened to bullion and ordinary commodities, and not to what has happened to money, and therefore the unit of account has not fallen in value although it will admittedly buy less than before of commodities in general. The answer to this is that it implies that value can and must properly be measured in labour cost of production instead of in commodities and services; the idea is that it has become more difficult to get gold and other commodities, and therefore they are more

valuable, and the higher price in the unit of account merely gives expression to this, and therefore has not been produced by the issue. But we do not measure, and few of us want to measure, value in labour-cost of production ; if we did so measure it, everything in savage or primitive times, when the productiveness of industry is very low, would be of enormous value. So this answer would be of no use if it were true, and that it is seldom, if ever, true is suggested by the fact that it has almost always been put forward as one of the defences of over-issue ; and it seems unlikely that inconvertibility and a decline in the productiveness of industry so often go together.

4. The more acute Government apologists content themselves with alleging that the issue is only one of two or more causes tending to raise prices. There are always many causes tending to raise prices, so that this is sure to be true, and it does not in the least destroy the force of the proposition that the issue tends to raise prices.

5. We now come to what is at once the most insidious and the most dangerous of all the arguments in favour of increasing issues. This is that the issuers have no control over the issue and that it is "automatic," as it only takes place when the notes are asked for, so that they are "issued in response to a genuine demand and not forced on people." It might as well be claimed that the issue of pocket-money to a child is not under the control of its parents because it is automatic, only taking place when the money is asked for. Old-age pensions,

when first established, might have been paid for some years without any addition to taxation or debt, by giving the pensioners a one-pound note every four weeks, if no reserve had been kept against the notes: would the pensioner's genuine demand for the notes have justified the statement that the issue was automatic and the Government had no control over its amount? If an extra hundred millions war-bonus (or peace-bonus for all the difference it makes) were paid by additions to the £1 and 10*s*. notes of £2,000,000 a week, would there not be a genuine demand for these additional notes? If the Government hires schoolgirls at £2 a week to watch a simple machine and defrays the expense by giving each of them two new £1 notes which are clear additions to the amount already outstanding, can it be said that these girls do not exercise a genuine demand for the notes?

Every monopolist producer controls his sales, and the Government manufacturer of notes is no exception. The monopolist of an ordinary commodity can limit his sales in one of two different ways, first, by offering a fixed amount of the product for sale by auction, and so letting the consumers determine the price, and secondly, by offering to sell any amount that may be inquired for at a price fixed by himself. The second is the usual method: it limits the total sold in the long run just as effectually as the other. If 100,000 bottles of some patent medicine can be sold at 3*s*. each, while 110,000 could scarcely be sold at 2*s*. 6*d*. and only 70,000 could be sold at 3*s*. 6*d*., it is all the same whether the monopolist says he will

sell 100,000 bottles a year for what they will fetch, or says the price is 3s. and anyone who likes can have a bottle at that rate. Just so with notes. The monopolist producers of notes control the issue either by saying they will issue such and such an amount, or by fixing the value and selling as many as are demanded at that value.

The first method of limitation is easily understood : the producers enforce the limitation simply by not printing notes (and not allowing anyone else to print them) beyond the prescribed number. The second method is enforced when notes are convertible into bullion, because that, as has been explained, fixes for them a price or value in bullion below which notes cannot be issued. When convertibility into bullion is absent, the price might be fixed in some other commodity than bullion—in lead for example, or rubber of some well-known quality. The issuers might be bound by law to give a certain number of pounds avoirdupois of lead or rubber in exchange for any note presented to them for redemption. But this would be re-establishing convertibility in the form of convertibility into lead or rubber instead of convertibility into bullion, and gold certainly will not be dethroned to make lead or rubber or any other single commodity reign as the standard of value. The only standard possibly superior to bullion is commodities in general. Actual convertibility of the note into commodities in general is impracticable : the Bank of England could not be asked to hand over the counter a basketful of the commodities represented in an index number. But,

as we have seen, notes may circulate on a par with gold although they are not convertible into it, because the issuers may sufficiently limit them by watching the price of bullion and issuing more notes when that falls and fewer when it rises. So notes might be made to circulate on a par with a collection of commodities such as is represented in an index number of prices although they are not convertible into that collection, because the issuers might sufficiently limit them by watching the prices of these commodities and issuing more notes when they fell and fewer when they rose. This is, however, the very last thing that in practice issuers, in the present state of economic instruction, are likely to do. They usually begin by adopting the exactly opposite principle because, incredible as it will appear to future ages, they think "when prices are high, more currency is required." Turn this round, express it in another way, and you have "when the value of currency is low more of it is required," and currency is thus made a striking exception to the general rule that the falling value of an article indicates that additional supply of it is becoming *less* required. It is of course no exception at all. When money is reckoned in gold, and more gold is produced, the value of money falls (general prices rise) and this indicates that additional supply of gold is less required : when money is reckoned in notes and more notes are produced, the value of money falls (general prices rise) and this indicates that additional supply of notes is less required.

When more coal is produced, the value of coal

falls, and this indicates that additional supply of coal is less required. Of course, if the coal-producers or the gold-producers accept a lower price for their product, they will find, down to a very low limit, plenty of " genuine demand " for it, but only because the demand has extended to take advantage of the lower price; and so it is with the note-producers: if they will accept smaller quantities of commodities and services in exchange for their notes, they will find, down to a very low limit, plenty of genuine demand for them, because they are cheaper. The only difference between coal and gold and notes is that coal is never money, while gold sometimes is, and notes always are: in consequence of which the value required in exchange for coal is always called its " price "; the value required for gold sometimes is and sometimes is not called its " price "; and the value required for notes is never in ordinary language called their price.

The feeble reply of the apologists to some such criticism as this is that in fact the rise of prices and wages comes first. This would be perfectly immaterial if it were true, which it probably is not. If it were true, it would only mean that the increase of the note-issue was anticipated. When a government has issued an additional £2,000,000 a week for months together, it is not unlikely that all business will be done on the assumption that this will continue. People may consciously or unconsciously expect a fall in the value of notes (a rise in general prices) just as well as they expect a rise in coal or jam.

When issuers have once adopted the absurd maxim "Higher prices: issue more notes," their country finds itself in what puzzled critics call a "vicious circle"—notes are increased, prices rise, notes must be further increased to "carry the rise," prices rise still further, and notes must be still further increased and so on, *ad infinitum*! No certainly: there is always an end to it. Often the real or fancied emergency which led to the suspension of convertibility disappears before the process of bringing down the value of the notes has gone too far for recovery, and with the disappearance of the emergency much of the bias in favour of that course is lost, and a return is made, perhaps slowly (as in America after the Civil War), perhaps painfully (as in England after the Napoleonic War and again after 1920), to a bullion standard. Two great injustices have been committed: the first to those persons and classes who suffered by the fall in the value of money, and the second to those who suffered by its subsequent rise. The two do not cancel each other, since those who gain by the second are not the identical persons who lost by the first, and vice versa. Institutions, too, suffer loss, though we can scarcely speak of justice in their case: one of the greatest losers is usually the State in its corporate capacity. The trifling gain made by issuing interest-free notes instead of interest-bearing loans is far more than set off by the higher prices which the State has to pay for everything which it buys during a period when its expenditure would in any case have been abnormally large—higher prices which lead to the contrac-

tion of debt far exceeding in magnitude what would have been the whole cost of the commodities and services obtained, if they had been paid for at the prices prevailing before and after the period of suspension.

Unless a halt is called, the end comes with a crash. In saying above that increases of the supply of coal or gold would always find plenty of demand at sufficiently reduced prices "down to a very low limit," we had in mind that no commodity is wanted in indefinite quantities. However the demand may extend, it will not extend indefinitely, and with every commodity there is a point beyond which no more will be required, however cheap the commodity can be got. It would take a considerable increase in the supply of coal to London to bring its price there down from say 30*s.* to 10*s.* a ton; but if a further increase of supply brought it down to 2*s.*, it is quite certain that a very little increase on the top of that would bring it down to almost nothing. Nobody wants indefinite amounts. So, too, with gold, perhaps even more clearly: very cheap gold would be unsuitable for currency and for ostentatious ornament, so two of the principal sources of demand for gold would cease to exist if gold were found in very large quantities. So it is with notes. As long as their increase is sufficiently slow and the total amount not "unreasonably" large, no one thinks of questioning their utility as currency, and there is plenty of demand at the lower price at which they are put on the market. But if the increase goes on, sooner or later there comes a time when the increase

is so rapid or the total outstanding becomes so large that even " the public " begins to wonder " what all this means," and when that happens distrust soon sets in, the general acceptability of the notes suddenly ceases, and they become absolutely worthless : some other currency is found to take their place.

§ 4. *Limitations actually placed on Inconvertible Currencies.*

The inconvertible currencies which have not succumbed altogether to the natural desire of the issuers to make the most of their powers without regard to ultimate consequences must be considerably more numerous than those which have met the fate described in the preceding section, and their number seems to be increasing. In their case it will always be found that in some way or other a limit to the issue has been in force.

Most often the issuers themselves have, like the Bank of England in the Restriction period of 1797–1821, voluntarily restrained themselves because they regarded the abandonment of the bullion standard as only temporary. Sometimes, like the British Treasury in 1920–23, desire to return to the bullion standard at the old rate has induced them not only to stop expansion but even to reduce an existing issue. At other times the existence of unsuspended laws requiring 100 per cent gold cover for additional issue has kept the issue down to its existing amount. Desire to keep the currency on a level with that of some other country or group of countries often plays a great part.

Since the first edition of this book was written the forces tending towards limitation have been greatly strengthened by the disastrous results of unlimited expansion in Germany and other countries after the war. Politicians can no longer be sure that the popularity of increased money-incomes will be greater than the unpopularity of higher prices. The probability of an inconvertible currency expanding indefinitely is consequently much reduced.

But it can scarcely be said that there has been much progress towards general recognition of the simple fact that the bullion standard should not be abandoned except with the object of putting a better standard in its place instead of leaving everything to chance.

# PART II

# FURTHER ELUCIDATIONS

## § 1. *The Supply of Currency and the "Quantity Theory."*

The sad results of experiments with unlimited currencies which followed the writing of the First Part of this book do not suggest the desirability of abandoning or even modifying any part of the doctrine taught therein, but they do suggest that further elucidation of several matters is required.

Some readers have asked, and others probably will ask, "What is the relation of this doctrine to the Quantity Theory of the value of money?"

It includes the Quantity Theory, but contains something more. The Quantity Theory, like so many other statements in economic literature, insists that X "depends on A, other things being equal or remaining the same," regardless of the fact that it would be equally true to say "X depends on B, other things (including A) being equal or remaining the same." It is possible that there may be ten or a thousand things on which X depends, and of each of them it is true to say that it depends on that one when the others are, as it is said, "impounded in *ceteris paribus*." Writers on economic questions

frequently overlook this, and imagine themselves at variance about fundamentals, when in fact the only difference between them is that one is more struck by the importance of A, and therefore says "X depends upon A, other things (including B) being equal," while the other is more impressed by the importance of B, and therefore says "X depends upon B, other things (including A) being equal." The first writer then goes about recruiting adherents to the "A theory of X," while the other seeks support for the "B theory of X," though all the time the two theories are really not opposed to each other, but are only two parts of the same theory, each of which is taught by an expositor who thinks less of the other part.

Just so the Quantity Theory of the value of money singles out quantity as the thing on which the value of money may be said to depend, other things (including Demand) remaining the same. It would be very astonishing if this were not true, since it is true of every commodity other than money that its value depends on its quantity, other things (including demand) remaining the same.

Certainly in the case of other commodities we are in the habit of speaking of "supply" rather than of "quantity," but the difference in wording does not seem to be important. The stock of some things (such as milk, or even wheat) on hand at any one moment is so small in proportion to the annual produce of the article, that we think of the stream of produce as furnishing the supply. Of other things, such as land, buildings and railways, the

annual production is so small compared with the stock in existence at any one moment, that we think of the stock, rather than the annual produce as furnishing the supply. In regard to this second class, we talk readily of the supply being increased when we mean that the quantity in existence has been increased. A country is "well-supplied" with railways or a town with a particular kind of house when the quantity of these things is great. Currency is one of the durable instrumental goods, such as houses, of which in ordinary times the stock at any moment is very large in comparison with the annual output, so that it is not surprising that in its case "quantity" has been used instead of "supply."

Given a certain demand, increase of the supply or quantity (whichever is the more appropriate word in the particular case) of any article reduces its value, and currency is no exception. The additional currency is usually given by the producer (or issuer) in exchange for commodities and services, and his coming in as a new and additional buyer of such commodities and services raises the price of these things and diminishes the value of the currency which he is offering in exchange. Whether the currency is gold or paper this is equally true. The gold mine-owners and workers turn their gold into currency and spend it on the things they want. A government involved in a war prints legal tender notes and buys munitions and military service with them. On the return of peace, it is true, it does not itself buy with the currency, but gives it away

in doles and subsidies; yet this makes no difference—the spending of the additional currency still takes place, as the recipients buy what they want with it. Even if the new currency is only issued by way of loan, the effect is the same: the borrowers are then the new and additional purchasers.

Sometimes it is objected that the demand for money is, unlike that for other commodities, inexhaustible, so that the issue of additional currency will not cause its value to fall, since the new issue will always be met by an additional demand for currency. But this objection is absolutely unfounded. It arises from neglect of the distinction, pointed out by Sidgwick, between the kind of "increase of demand" which raises price and the other kind which he calls, very aptly, "extension of demand." We often say that the demand for a thing has increased when we only mean that people are taking more of it because they can get it cheaper. It is obvious, however, that it is not this kind of increase of demand that we have in mind when we discuss the effect of increase of demand upon values. We could not say in the same breath that increase of demand for houses raises the value of houses, and that a fall in the value of houses causes an increase of demand for them. We can, however, say in the same breath, that increase of demand raises the value of houses, and that the fall of value *extends* the demand for them (or, vice versa, a rise of value *contracts* the demand). No more in the case of currency than in any other case does the increase of supply defeat itself by causing *increase* of demand.

It only *extends* demand, inducing people to hold more currency because the fall of value makes it possible to hold larger amounts with equal sacrifice and necessary to hold larger amounts to secure equal convenience.

Granted that the Quantity Theory is right in asserting that increase of quantity, demand remaining the same, will raise prices and diminish the value of currency, the next question is, " How much will any given increase of the quantity diminish the value of the currency ? " This, of course, depends on what is now called by economists, following Marshall, the " elasticity of the demand " for currency. The demand for a thing is regarded as being the more elastic the more it will extend on any given fall of price, or, to put the same thing in what for our present purpose is a more useful way, the less difference any given addition to the amount put on the market will make to the price, the more elastic is the demand. If the demand were such that an increase of supply would always cause an exactly reciprocal fall in the value of the article, the elasticity of demand for the article would be said to be always " equal to unity." So if the elasticity of the demand for currency were always " equal to unity," doubling its quantity would just halve its purchasing power and just double the prices of other commodities, however often the doubling was repeated.

Now, it has very often been assumed that this is actually the case, without any inquiry why it should be so. Though ever since the time of Davenant in

the seventeenth century it has been a commonplace that a drop in the supply of a necessary of life below the normal quantity will raise the price much more than in proportion to the deficiency, popular apprehension has never quite reconciled itself to the fact, and persists in thinking it unreasonable. It is somehow supposed to be " quite natural " that the price should rise in proportion to the deficiency, but not more. This is probably the explanation, though of course it is no justification, of the neglect to ask why the elasticity of the demand for money should be assumed to be equal to unity.]

When the question is asked, the answer is not very difficult. The peculiar use of currency suggests it at once. Each individual holds his stock of currency in order that he may be able to buy a very definite quantity of commodities and services before his stock of currency is replenished. If he is well-to-do and receives his income through his bank, his stock of currency has to hold out till he draws another cheque to " self " to replenish it. If, without any alteration in his real wealth, prices double, he will (so far as he is not the creature of habit nor deterred by the weight or bulk of the currency) double the amount of each cheque to " self " (instead of going more frequently to the bank) and hold double as much currency as before. Similarly, in the case of a workman whose holding of currency depends on his weekly wage, if his real earnings (reckoned in commodities and services) are unaltered, so that his wage will buy the same collection of things as before, his wage and his holding of currency must be doubled

when prices are doubled. From this it appears quite plainly that the average holding of currency at any time must normally equal in value a particular collection of goods and services. It is only simple arithmetic to infer that the aggregate holding of currency, alias the "quantity of money," must normally equal in value a certain definite aggregate of commodities and services.

This is now so well recognized that it has been made the basis of prognostications of the future which have been realized in practice. When we have found that some rapidly depreciating currency, though nominally immense, has worked out at a ridiculously small sum in pounds or dollars, we have said, "Of course this is an impossible situation; either the value of the currency will go up again or more of it will be issued," and we have turned out right.

But, while it is reasonable to assume that we should expect the elasticity of the demand for currency to be equal to unity, we should beware of accepting the doctrine too readily. Great doubt is thrown on it when we reflect that if it were universally true, issuers of legal tender could go on buying goods and services with new issues indefinitely. The process of doubling the currency in, say, the first month, would indeed gradually bring the purchasing power of the unit down to one-half, but as the issuer at the beginning would be buying very near old prices, and only at the end at the new prices, he would have acquired goods and services worth over three-quarters of the value of the total of the old currency.

By another issue equal to the old currency he would only get half as much, but there is nothing to prevent him issuing twice as much in the second month, four times as much in the third, eight times in the fourth, and so on, and then he will be able to go on acquiring the same amount of commodities per month indefinitely. Experience seems to show that the unit of a currency falls to zero in value long before the supply of the currency reaches infinity, and believers in the doctrine have been unable to explain why. They have contented themselves with eluding the point by means of propositions such as, " however many units of currency may be issued, so long as they really circulate, they will always have some value, however small." No doubt ; but is it not equally true that so long as they have some value they will continue to circulate ? They will stop circulating when they lose all value. The explanation seems to lie in the fact that human intelligence anticipates what is coming. When it is recognized that the value of currency is steadily falling, people see that it is more profitable to hold goods than currency, the demand for currency fails to extend in proportion to the enlargement of the supply, and its value consequently falls more rapidly. The issuer very likely redoubles his efforts to keep up with the fall by issuing new currency at a still more rapidly increasing rate, but all to no purpose—he is bound to lose the race, and the reason is that the elasticity of demand is less than unity.

In the converse case, that of reduction in the supply of currency, there is also reason to expect

an elasticity less than unity. As general prices fall owing to the reduction, people will endeavour to protect themselves by displaying greater readiness to part with goods and services, and less to part with currency, and anticipation will thus cause the fall of general prices to outrun the diminution of currency. Pushed to the extreme limit, the policy would put a stop to the circulation of the currency, as it would all be hoarded, and exchanges of goods would be made by barter. But things are never pushed so far, because long before that happens substitutes for the existing currency are always introduced and check the rise of purchasing power. For example, as soon as a reduction of our present (1935) paper currency went so far as to make £1 worth more than 113 grains of fine gold, substitutes for it, in the shape of sovereigns and half-sovereigns brought out from hoards all over the world and newly coined would begin to come into use.

Hence the doctrine of the elasticity of the demand for currency being equal to unity, though it may be usefully put forward as a first approximation for expository purposes, must not be taken as universally true. It certainly is not when rapid change of quantity and intelligent anticipation of the future exist.

§ 2. *The Demand for Currency.*

Early in the preceding section I pointed out that while the supply of quickly consumable articles of which the annual output is large compared to the stock in hand at any moment can most conveniently

be taken to be the periodical output, yet when we have to deal with things which last a long time, and therefore in ordinary language are said to be " used " rather than " consumed," we often, as, for instance, in the case of houses, treat the quantity in existence rather than the periodical output as the " supply."

A corresponding distinction exists in regard to demand. The demand for houses and farms is not, in most discussions, conveniently conceived as the demand for new houses to add to or replace the old and for new farms just created on the outskirts of civilization, but as the demand of persons who wish to " occupy " or use farms and houses, both new and old. Under Supply we found that currency belonged to the class of things of which the supply can conveniently be taken to be the quantity in existence, and now, under Demand, we may think of currency as being demanded by people who want to hold it rather than to consume it.

This idea of the demand for currency coming from the holders runs through the whole of the First Part of the present book, and is most important to the argument put forward there. But it appears very strange to all who have been brought up to believe that the demand for currency is furnished by the number and amount of the transactions effected. That belief seems to me to be exactly equal to a belief that the demand for houses comes, not from the people who want to live in houses, but from people who buy houses and sell them again forthwith. The effective demand for houses evidently comes from those who want to *hold* houses: even

the speculator wants to hold for a time. Mere "activity in the house market"—a little more changing ownership than usual—only involves an increase of demand in the same sense as it involves an equal increase of supply which cancels it. Whatever may be said about the actual use of the terms, it is clear that the demand which is important as affecting the value of the houses is the demand for occupation. Similarly, more transactions for money —more purchases and sales of commodities and services—may in a sense be said to involve increase of demand for money, but in the corresponding sense it may be said to involve an equal increase of supply of money; the two things cancel. The demand which is important for our purpose is the demand for currency, not to pay away again immediately, but to *hold*. Just as you are a less important demander of houses if you occupy a £1,000 house than if you occupy a £2,000 house, so you are a less important demander of currency if you keep on the average £5 in your pocket than if you keep £10.

The usual talk of "velocity of circulation" is only a clumsy attempt to express this truth. If we say that additional sales and purchases may be effected without alteration in the value of money, provided the velocity of its circulation is increased, we may equally say that additional transfers of houses may be effected without altering the value of houses, provided the velocity of the circulation of houses is increased. We do not say that, because the futility of it would be obvious; it is so much

simpler to disregard both the transfers and the velocity of the circulation of houses and come at once to the ultimate demand, the demand for houses to *hold*.

It may be said that, in addition to the demand of persons and institutions for currency to *hold*, there is also sometimes a demand by banks and governments for currency to *destroy*, as, for example, happens when the bank or the treasury is reducing the aggregate amount of notes outstanding. But as this demand always, or almost always, comes from institutions which have issued quantities of paper and subsequently repented, it is usually regarded as simply reducing the supply instead of increasing the demand. In favour of regarding the institution as a demander, it may of course be said that the fact that it acquires the currency to burn rather than to hold is immaterial, since it makes no difference whether the currency acquired is held or burnt, provided it is not reissued. It is, someone may say, all the same whether notes which have been withdrawn have been cancelled or are still held by the issuers uncancelled. But this is not quite true, since, if the notes were still held, they would appear in the total stock which we have agreed to call the supply, whereas, having actually been destroyed, they no longer appear in the total. Consequently, it is more convenient to follow ordinary usage in this matter, and speak of banks and governments which buy up and burn currency as reducing the supply. The analogous case in regard to houses is when houses are bought up by some person or institution

for demolition. We think of this as causing a reduction of supply rather than an increase of demand.

To clear up our ideas about the demand for currency, let us think of a few obvious causes of increase and decrease of demand for it.

The most obvious cause of increase of demand for a currency is an increase in the number of persons who use it. At a very early age—often at his or her christening—each new member of the human race begins to hold a small quantity of currency, and the child of six sometimes has more than his father or mother. There are plenty of examples of increase of demand from this source having been sufficient to cause a noticeable increase in the value of a currency which is limited in amount—the Indian rupee, after the closing of the Indian mint, and the American greenback are often quoted, and the general increase of gold and silver-using populations, though it has not actually raised the value of gold and silver currencies, has at any rate obviously prevented them from falling as fast as they would otherwise have done. The great rise of prices after the Black Death may be given as an example of the converse effect of diminution of population in diminishing the demand for, and consequently the value of a currency.

The introduction of anything which economizes currency, i.e. which makes it unnecessary for people to keep so much currency by them on the average, tends to diminish the demand for currency. The banking system is the most important agency in

this respect. The question how and in what degree it economizes currency and tends to raise prices must be postponed to the next section.

A change in the distribution of wealth may cause a change in the demand for currency. If the rich and banking portion of the people becomes richer, it does not keep appreciably more currency in its pockets, but increases its balance at the bank. But if the poorer non-banking portion becomes richer, it does accumulate currency, not only in its pockets, but also in money-boxes and mugs on the chimney-piece and other strange places.

Innumerable are the changes of social circumstances which may lead to greater or less economy of currency and consequently less or greater demand for currency. The calling up of men for military service, and subsequently the large removal of women from their homes for munition-making and other purposes during the recent war, greatly increased for the time the demand for currency, because the members of families, when separated, found it convenient to keep much more currency by them in the aggregate than when they were living at home and together.

Like the demand for other things, the demand for currency is liable to be varied by the miscalculations of mankind about the future. If we were all level-headed prophets, fluctuations of prices would be smoothed out. There would still be slowly rising and falling tides, but waves would disappear. But in fact we all foresee wrong, and our individual mistakes do not balance each other—we foresee wrong

to some extent in unison. One year we agree in over-estimating the potato crop, and the next year in under-estimating it: when we over-estimate it, our willingness to buy early is less than if we foresaw correctly, and for the time demand is kept below what it would be if prices were kept as stable as possible. The same thing happens with currency, though it is not nearly so obvious. If there is a predominating impression that prices in general are going to rise, there will be a predominating tendency to hold commodities for the rise, which will itself raise prices at once. Everyone can see this, but few notice that this tendency to hold goods back, resulting in a rise of prices, is the same thing as a diminution in the demand for currency.[1] Currency becomes the depreciating article which people in general are less willing to hold. Vice versa, if it is generally expected that prices will fall, most people

[1] The statement in the text seems at first sight to be contradicted by the fact that sometimes, as in Germany in 1922 and 1923, it has happened that a sudden access of belief that prices are going to rise higher has caused a rush to the banks by depositors anxious to draw out cash to spend. But when this is called a demand for currency, the term is not being used in the same sense as that in which we use it when we say that an increase in the demand for currency lowers prices. It means not an offer of goods for money, but merely a request by creditors that their debtors shall pay them money which is owing, and they make this request not in order to have more currency to hold, but in order to have more to spend. It is no more the kind of "demand" for currency which lowers prices than the corresponding rush, which is going on at the same time, to take money out of money-boxes and old stockings. A asks B to repay money entrusted to him, not because he wants the money to keep, but because he wants to get rid of it in exchange for something more likely to retain its value. If additional currency is printed to meet this kind of demand for currency, the depreciation simply becomes worse than ever.

are more eager to get rid of goods and are more willing to hold currency.

We must not expect to find evidence of increased or decreased willingness to hold currency in actually increased or decreased stocks of currency. If the total is a fixed amount it cannot vary in that way. The evidence is to be looked for in the fact that more or less goods are actually being given for the unit of currency. We can have an increased and a decreased demand for houses without finding any alteration in the number or size of houses.

The effect of misguided speculation for the rise or fall of the value of a currency is disguised, so far as internal speculation is concerned, by taking the form, in each individual case, of speculation for the fall or rise of particular commodities. Very few persons grasp the idea of a rise and fall in the value of their own country's money, and the Money Market is a place where you deal in loans, not in money. We have not yet risen to the height of having a Currency Market in which we can buy and sell future Board of Trade, Statist and other Index Numbers. But direct speculation in the currency of other countries is common enough, and is often ill-informed enough to cause great disturbances of values, instead of smoothing them down. Soon after the war, the editor of an Athens journal was unable to go to a certain restaurant there because the waiters worried him with questions about the future of Austrian crowns which they were holding. When the British troops first went to Cologne, they bought German marks because they saw that the

mark was "lower than usual." It is known that many milliards of the most depreciated currencies have often been held by foreigners. Such holding is, of course, a pure addition to the usual demand for currency, and tends to maintain its value for a time. Eventually, however, the foreign holders decide to sell, and their decision is much more likely to come at a time when it will make a fall more precipitous than when it will moderate a rise. This ignorant speculation of foreigners has been the cause of many violent fluctuations of currency values and is a great support of the doctrine that they "depend on confidence." About that we need not say more than that the price of sugar also is affected at any moment by people's views of what it will be in the future; but we do not say that "the price of sugar depends on confidence."

The supply being taken as fixed, *how much* will a given increase of demand send up the value of currency? The question is not so often asked as the corresponding question, "How much will any given addition to the supply raise prices?" because we do not feel ourselves able to measure additions to the demand as easily as additions to the supply. But one example seems workable. Suppose that to a country with a particular currency of its own there is added a new province one-tenth as large and with exactly similar characteristics, which has just, by some accident, lost all its own currency, and that the annexing country creates no additional currency, but allows the new province to supply itself as best it can. We may look on this as providing, after

some initial disturbance, 10 per cent of additional demand. The people in the new province, wanting a medium of exchange, would have to give people in the rest of the country commodities and services to induce them to part with some of their holdings of currency; these sales would send down the prices of commodities and services, and correspondingly elevate the value of the currency. There seems reason to believe that when things had settled down the rise in the value of the currency would correspond exactly with the increase of demand. If prices fall from eleven to ten, and £10 consequently buys as much as £11 did before, people will find it convenient to hold only £10 of currency when they held £11 before. So to induce the old part of the country to part with one-eleventh of its stock of currency, a reduction of prices by one-eleventh will be necessary and sufficient. This supports the doctrine that in the absence of anticipation of future change the elasticity of demand for money is "equal to unity."

§ 3. *Banks and Prices.*

Some writers contend that bankers control prices, forgetting apparently that prices existed and rose and fell for ages before there were any banks. It may therefore be well to recapitulate and emphasize the doctrine taught in Part I about the relation of banks and banking policy to prices.

Modern banking began to be important in this respect when people first found it convenient to hold bankers' notes for sums of money instead of gold and silver coins. The practice economized the

metals, inasmuch as the bankers did not find it necessary to keep coin equal to more than a moderate fraction, perhaps a third at most, of their liability on their notes. So the invention and introduction of convertible bank-notes tended to reduce the demand for the precious metals, to keep their value down, and consequently to keep general prices up. But the actual effect was small for a long time, because the demand for the metals was world-wide, while the area in which bank-notes was used was not large. Later, when the bank-note area grew in size and importance, the ability of banks to economize metal was very much restricted by legislation which insisted upon their keeping large holdings of metal against their notes. If the necessary holding approached closely to 100 per cent the metal would not be economized at all, but rather the contrary, since the fact of being able to hold considerable sums in convenient paper encourages people to hold larger amounts of currency than if they could have nothing but coin. Legislatures have also sometimes prohibited the banks from issuing notes as small in denomination as the public would have been ready to accept and hold. In spite of these restrictions, however, the aggregate economy of metal arising from the use of convertible bank-notes in the world at large was very considerable at the commencement of the twentieth century. Its importance in keeping down the value of gold can be appreciated if we try to estimate how much more gold would have been demanded if the United States, France, and a dozen other of the principal

countries using large quantities of bank-notes had suppressed them.

But alongside of bank-notes another economy had been introduced which eventually to a great extent took away the need for bank-notes as a substitute for gold. This was the cheque system, under which, instead of each of us encumbering ourselves with a stock of currency in the form of coin or bank-notes, we "put our money in the bank," and content ourselves with a small pocketful of currency replenished from time to time at the bank, knowing that we can make all large payments more conveniently by ordering the bank on a piece of paper to transfer some of what it owes us to the person whom we wish to pay. The device does away with the necessity of an immense aggregate quantity of currency, since the banks do not need, in order to carry out their part in the arrangement, to hold nearly as much as their customers would have been obliged to do in the absence of the system. And the banks' liberty to hold as little as they find necessary has been less restricted by legislatures than their corresponding liberty in regard to bank-notes. The economy of gold and consequent tendency to cheapen gold and raise prices is obvious, and certainly very great.

We have, however, no means of estimating it. We may know that we keep an average of £10 a head in currency now, when we have banks, but we cannot possibly form the wildest guess how much we should keep if there were no banks. Some of us would probably never have been born: the whole

situation of the world would be different. We must beware of any assumption that the amount of the economy is indicated by the magnitude of the aggregate of bank deposits. Even if the aggregate of bank deposits excluded all double reckonings by which it may be swelled beyond the net amount due to persons who have credit balances, it would probably be greatly in excess of the amount which those persons would hold in currency if no banking facilities were available. If the facility were not there, each of us would set about devising means for making our incomings coincide more nearly with our outgoings rather than keep in the house sums of currency as large as our present bank balances.

A still worse error, which has, unfortunately, been countenanced by many high monetary authorities in recent years, is to suppose that the aggregate of deposits is a kind of money (sometimes it is called "bank-money") which should be added to the actual stock of coin and notes existing at any moment. The individual, no doubt, finds "money in the bank" much the same as "cash in the house," but the aggregate of all the individuals' balances at their banks is only an amount which the bankers are liable to pay, but which they could not possibly pay in cash all at one moment. A liability to pay cash is certainly not cash; both debtors and creditors are painfully aware of the fact. When additional currency is put on the market by someone who has the power of issuing it, prices are raised, because the issuer's offer of money in exchange for goods and

services is *additional*, the power of nobody else to spend money having been reduced. When, on the other hand, a person increases his balance at his bank he increases the bank's power to lend only at most by the amount which he forgoes, so that the aggregate money-spending is not increased.

This is obvious when looked at from the side of those customers from whom the banks derive all their power to lend except what is derived from their own capital. The opposite view arises entirely from a curious belief that the power of the banks' creditors (i.e. the depositors) to deposit is derived from the sums lent to the borrowers instead of the banks' power to lend being derived from the depositors. Banks are thus supposed to make something out of nothing, and the only wonder is that they use their power with such extraordinary moderation.

But whatever some bank chairmen and some monetary theorists may think, every bank-manager knows that the customers who provide the funds which the bank lends and invests are substantial people who have property of their own which they find convenient to entrust to the bank. They could, if they had time and inclination, lend direct to the same people to whom the bank lends, but they find it better to entrust the business to an intermediary, the bank, which is expert at it and, by clubbing a number of them together as its customers, is able to let each of them have the money at any time when they happen to want it. The bank will pay them a little interest, or, if not, will render many services gratuitously, including the service of keeping the

sums deposited more safely than they could be kept in cash in the house.

A good proof of the nature of what underlies bank deposits is to be found in the death-duty returns. If everyone with any property died at the same moment these returns would give the aggregate property at that moment. The amounts owed by individuals who had borrowed from banks would not be set against and cancel the "cash at bank" in the returns of the property of individuals who had lent to (deposited with) the banks: death-duties are payable on "cash at bank." They would be set against and cancel the value of property held by the debtors. Thus if John Smith had £300 cash at bank and James Brown had borrowed £300 from the bank and bought sugar which has now become worth say £310, John Smith will be assessed for death-duty on £300 and James Brown on £10. The perfectly real thing underlying the figures in the bank books is the sugar, and though that was in the possession of Brown, this was only because Smith, through the bank, let Brown have the use of some of his "money," "capital" or "property," whichever phrase the reader prefers to use.

The fact that the banks are employed as intermediaries makes no difference to the substance of the matter. If all the individual mortgagees in the country called in the mortgages after due notice and, as the money came in, deposited it in banks which lent it out again on the same properties, the aggregate of bank deposits would be greatly raised; but does anyone suppose that the "money" in the

country would be increased and commodity prices raised? If all the Smiths had lent their three hundreds direct to Brown, bank deposits would have been less, but commodity prices would not have been less.

"This is all very fine," some reader will say, "but surely it is true that banks control prices, since we know that putting up the bank-rate checks rising prices." Such a reader will probably suppose (with many authorities who ought to know better) that the high bank-rate acts by reducing the "bank-money" which they suppose deposits to consist of. Certainly it tends to reduce borrowing from the banks, but it is accompanied by the offer of higher inducements to depositors to deposit or not remove their deposits. If the object of a rise of bank-rate were to reduce deposits, it would be accompanied by the announcement of a reduction of the rate allowed to depositors, instead of which it is always accompanied by the announcement of a rise in that rate. The object of the rise of bank-rate is not to reduce deposits, *but to prevent advances growing faster than deposits*: if it causes deposits to grow, so much the better. The discouragement to borrowing causes the borrowing class to diminish their expenditure and does not encourage the lending class (the depositors) to increase theirs, but rather to diminish it. The banks, by this policy of encouraging the depositors and discouraging the borrowers, very naturally tend to accumulate cash, which was just what they wanted. So, in consonance with the general theory of this book, there is an increased

demand for currency, which tends to lower prices. The banks take some currency off the market by "increasing their reserves," and, if we choose to put it in this way, we may say that they thereby, in so far, reduce the economy of currency effected by banking, an economy which becomes dangerous, and is therefore quite properly reduced, when the banks have lent or invested nearly 100 per cent of what has been lent to them.

This power of taking currency off the market, however, is of a very limited kind and is not likely to be exercised to the full. The banks could not keep more than a very moderate fraction of their deposits in currency without sweeping away their profits and beginning to lose by their trade, and they are not likely to throw away their property in what would be in the long run a hopeless struggle to stabilize prices. What they may reasonably be expected to do is to discourage borrowing when it is going so far as to threaten their own security. This is a useful service to society as well as to themselves: it prevents the agonies of financial crises by checking the booms which precede them. But it is preventive of those rises of prices which come from epidemics of optimism rather than of those more serious rises which come from excessive creations of currency, whether these arise from gold-mines and minting or from the printing of notes to meet the exigencies of governments which do not care to meet their expenses honestly by means of taxes or even loans. The utmost possible increase of gold held against deposits by banks throughout the world would be

a small matter compared with the present decennial output of the gold-mines, while to ask the banks of a country, say, for instance, Germany in 1923, first to print notes to lend to the government and then to absorb in reserves an equal quantity would be simply ludicrous. The remedy for excessive issue of currency is not to be found in regulation of the rate of interest charged by and paid by certain intermediaries (the banks) between lenders and borrowers, but in regulation of the issue of the currency.

### § 4. *The Effect of " Cover " on the Value of Paper Currency.*

In the absence of legislation, now very common, relieving them from their obligations, it is obvious that banks which issue bits of paper promising to pay coin or bullion on demand should, and must to avoid bankruptcy, keep in hand whatever amount of coin or bullion is required to enable them to perform their promise. The amount necessary will vary enormously with the circumstances of the time and place, and to make any generalizations about it is made more difficult by the fact that banks of issue almost always accept deposits from customers. They undertake to repay these also on demand, and the coin kept in hand for that purpose is not and evidently cannot be separated from what is kept as " cover " for the notes. The only thing that is very certain is that if a bank's notes once get into circulation and remain in circulation for some years, the average cover required will be a

very small percentage of the amount of notes outstanding, as the demand to exchange them for coin will always nearly equal the demands to exchange coin for them, and such discrepancies as occur will be known to be due at particular seasons, and therefore can be provided for shortly before they occur.

No one ever supposed that the proportion of such "cover" held against convertible notes directly affected their value. Their value will be the same as that of the coin into which they are convertible, whether 1 per cent, 50 per cent, or 100 per cent are "covered," so long as conversion is believed to be obtainable if asked for. The effect of variation in the amount of cover on the value or purchasing power of money, is to be looked for only in its very trifling influence on the world demand for the metal of which the coin is made: the greater the cover held against notes the less is that metal economized.

Legislators have very commonly believed that bankers are apt to underestimate the amount of cover which it is necessary to hold in order to secure convertibility at all times, and they have also often thought that, even when convertibility is secured, bank-notes are likely to be issued at times in excess of what is desirable in the interest of stable prices and business. They have therefore been inclined to make laws for the purpose of compelling bankers to keep more "cover" than they would do of their own volition. The more cover kept, the less profit on the issue of notes, so that such laws, when effective, tend to damp the otherwise natural desire of banks to issue as many notes as possible. In the

extreme case, where 100 per cent of cover must be kept against all notes issued, the whole of the profit of issue is taken away: and where 100 per cent must be kept against all notes issued above a certain amount (as for instance under the Bank Charter Act, 1844, in England) all profit in issuing more than that amount is taken away.

When an issue is inconvertible into free bullion and has in consequence of over-issue sunk below the bullion value it should represent, the inexpert are apt to imagine that the proportion of cover held against it does, or should, determine its value. A Canadian Minister of State at a time when the Canadian paper was inconvertible actually complained of the fact that the dollar was worth less than the American dollar although, as he said, the cover held against the inconvertible paper Canadian dollar was a larger proportion of the issue than the cover held against the American convertible paper dollar. If the whole of the paper currency were about to be exchanged for the whole of the cover, there would be reason in this belief. If, for example, in July, 1923, the 25,000 milliards of German currency had been exchangeable with the 650 million gold marks held against them, the value of a paper mark might have been taken to be one forty-thousandth of a gold mark, and if the three hundred millions of British Currency notes had been exchangeable with the fifty millions of cover, the £1 Currency note might reasonably have been taken to be worth one-sixth of a gold pound, though the £5 Bank of England note, on the same principle, would have been worth about

six-sevenths of five gold pounds. But nothing of the kind was expected, and when the cover is not going to be paid out how can it affect the value of the thing said to be covered? Buried in cellars, it might as well be under the sea in the *Titanic*, or under the ground in the Transvaal.

Yet to such lengths of absurdity does the worship of "cover" go that cases have been known in which the issuers of inconvertible paper actually increased the issue in order to buy cover with the addition. Little over a century ago, for example, when the then inconvertible notes of the Bank of England were depreciated, the Bank issued more in order to buy gold. Since then there have been many instances in which return to a gold standard was delayed by the effort to accumulate cover, when what was really needed was a diminution of notes. Obviously, if the issuer of a paper currency which has become depreciated sells notes and buys gold, he lowers the value of his notes by supplying more, and raises, though doubtless not so much, the value of gold by demanding more, and thus he widens the gap between the par value and the actual value of his currency. If he wants to raise the value of his notes, he should do just the opposite, sell any gold he has and buy—and burn—notes. If the government of this country had been really anxious and determined, in spite of all opposition, to raise the paper pound to par with the gold pound immediately, they could have done it very quickly some time before 1925 by applying a substantial but not overwhelming proportion of the gold held against

the Currency and Bank notes to the purchase and cancellation of notes.

While increase of cover has no tendency to raise the value of an inconvertible paper currency but rather the contrary, it is nevertheless true that the *requirement*, if enforced, of 100 per cent cover for all further additions to the amount of the paper will tend to maintain its value. There is nothing paradoxical in this. It happens simply because the requirement deprives the issuing bank of all motive to increase the issue and substitutes a penalty: if the issue is depreciated 60 per cent it will, to adapt a famous phrase, have to pay tenpence for fourpence. If in its senses, it will not increase the currency on those terms at its own expense; it may, however, of course, induce the government to bear the expense.

### § 5. "*Scarcity of Commodities*" *as a Cause of High Prices.*

During the war and afterwards, when a currency began to depreciate, it was often said that the cause of the rise of prices was a growing scarcity of commodities. This was supposed to be an argument in favour of increasing the currency, though it is difficult to see how any sane person could believe that the fact that commodities had declined in quantity was a reason for making that decline greater in proportion to currency by increasing the quantity of currency. If there is a desire to keep prices stable, it would seem much more reasonable to *reduce* the currency when there is a decline in the quantity of

commodities. If the value relationship between currency and other things is upset by a decline in the quantity of other things, it certainly will not be restored by increasing the quantity of currency.

But though the reduction in the amount of commodities available was obviously no argument for increasing currencies, it is worth while to ask whether in treating of the causes of the rise and fall of prices in general, we do not require to take more account of such changes in the amount of commodities than has been taken in the earlier part of this book.

It may be argued that, as the value of everything is reckoned by the quantity of other things for which it exchanges, the quantity available of all such things is just as important as the quantity of the thing itself. Iron or wheat, while remaining available in the same quantity as before, may rise in value because other things have become more plentiful. Therefore, it will be suggested, in treating of currency and prices, we ought to think just as much about the quantity of commodities in general as about the quantity of currency.

The answer to this is that, in fact, no one thinks it necessary in the case of any ordinary commodity to insist on the fact that its value depends on the absolute plentifulness of all other commodities as well as on its own absolute plentifulness. The relationship between the quantities is the thing we have to consider, and it is both legitimate and convenient to treat of changes in this relationship as if they were always caused by changes in the

quantity of the thing in question, ignoring the possibility of their being caused by changes in the quantity of all other things. It is legitimate, because it makes no difference to the argument whether the change in relationship is caused by change in the thing itself or in all the other things. It is convenient, because the change in all other things is almost always so slow as to be practically negligible over such period of time as we are likely to be interested in.

Currency is certainly no exception to the rule. If its standard is a metallic one, this is obvious. There is no more reason for insisting on the quantity of all other things when we are dealing with gold or silver than when we are dealing with iron and tin.

If the standard is a paper unit, the variations in the quantity of all other things are likely to be even less comparatively important than when it is metallic.

The "scarcity of commodities" during the war was mythical. Production was really very large; what happened was that it was diverted into unusual channels. The production of a great many important articles fell off, but immense quantities of munitions of war were produced instead; many services were dispensed with, while military services immensely increased. No doubt the old commodities counted for much more in the composition of index numbers of prices than the new commodities, and consequently the index numbers exaggerated the real rise of general prices. But this forms merely one

more example of the admitted difficulty of adapting index numbers of prices to changing circumstances.

In the lassitude which immediately followed the war and the post-war boom, it is probable that there was some appreciable reduction of commodities in general, but it is quite certain that this was absolutely negligible compared with the enormous fluctuations in amounts of currency which took place. Any abnormal scarcity of commodities which occurred was the merest trifle compared with the superfluity of currencies.

Further, it may be pointed out that the neglect of changes in the quantity of " all other things " in the earlier part of this book is more apparent than real. The two things which are likely to increase " all other things " are increase of industrious population and increase of produce *per capita*. Increase of produce *per capita* is much the same as increased wealth, and both this and increase of population have been dealt with under demand for currency so far as appeared necessary.

§ 6. *" Plenty of Commodities " as a Cause of Low Prices.*

Now, in 1935, we more often meet with the converse of the doctrine examined in the preceding section. We are told, often by the same persons who argued that scarcity of commodities was the cause of the high prices during and soon after the war, that the low prices of recent years are due to the plenty of commodities. We are asked to suppose that nothing has happened on the monetary

side of the matter to account for the fall, but that productive power has increased so enormously in the last few years that the fall of prices is to be accounted for entirely by the greater production of the commodities and services for which money is paid.

There is a very obvious objection to this doctrine. It is extremely improbable that any such great improvement in productive power can have occurred in industry, taken as a whole, in so short a time. Great improvements have taken place in certain industries, but the great mass of labour goes on pretty much as it did ten or twenty years ago. The force of this objection, however, is to some extent weakened by the fact that the index numbers of prices probably give too much weight to things of which the production has in fact been improved, and too little to the others, so that the fall of prices is not really so great as we fancy it. On the other hand, the objection is strengthened by the fact that we know that hours have been shortened and that a very large portion of the able-bodied population has been out of work, and that all the indexes of production agree in suggesting not a rise but a fall in quantities of things produced. The plentifulness of commodities in 1931–2 is really as mythical as their scarcity during the war period.

# PART III

# THE RECENT HISTORICAL EXAMPLES

## § 1. *The Pre-War Gold Standard.*

Before the war which began in 1914 the currency of England and Wales consisted of bronze coins for a penny, halfpenny and farthing, silver coins for various sums from 3*d*. to 5*s*., gold coins for £1 and 10*s*., called sovereigns and half-sovereigns, and lastly, Bank of England notes for £5, £10 and larger (always round) sums. There were also a few country bank-notes, but as these died out altogether before 1925 in consequence of provisions in the Bank Charter Act of 1844, we may ignore them.

Sovereigns, as issued from the Mint, weighed a little over 123¼ grains of " standard " gold, but one-twelfth of standard gold being alloy, they contained only a trifle over 113 grains of " fine " or pure gold.

The bronze and silver coinages formed a purely " managed " currency. They were kept at par with the rest of the currency by the policy of the Mint, which was to coin as much as and not more than could circulate comfortably at the appropriate rate. Of course, occasionally a withdrawal of such subsidiary coinage may be required by a fall in the

demand for it; but since 1816, when the policy was first adopted in regard to silver, there had been no instance of a considerable decline in the demand for bronze or silver coins, so that the amount in circulation had been sufficiently regulated by greater or less activity in coinage. The metal in the coins was always worth considerably less than their face value, so that there was never any danger of their being melted or exported for the sake of their metallic contents.

Bank of England notes were printed promises by the Bank to pay sums of pounds on demand. Though legal tender for pounds when tendered by anyone else, they were not so when tendered by the Bank itself, so that holders of the notes could require the Bank to pay in gold coin (silver coin being legal tender only up to £2 and bronze only to 1*s*.). This obviously made it impossible for the notes to be issued or to continue in circulation in larger total amount than was compatible with their maintaining a value equal to that of a sovereign for each pound expressed on their face. And the sovereigns, in turn, could not be issued and kept in circulation in larger aggregate amount than was compatible with their maintaining a value equal to that of 113 grains of fine gold, since, if they fell appreciably below that level of value, some of them would be melted or exported by holders who would see a profit in the transaction. A sovereign being worth less than 113 grains when passing as £1 would mean, in the language of the bullion market, that the price of gold was above £3 17*s*. 10½*d*. standard

and £4 4*s*. 11½*d*. fine, so that full-weight sovereigns would sell for use in the arts or for export for more than a pound each. Thus the aggregate currency of bank-notes and sovereigns was always kept in check by the convertibility of bank-notes into sovereigns and the convertibility of sovereigns into free gold bullion.

On the other hand, the Bank of England notes could not be so deficient in total amount as to rise in value appreciably above the rate of 113 grains to the pound, because the Bank was bound by law to give notes in exchange for all gold bullion offered to it at £3 17*s*. 9*d*. per ounce standard. Thus bank-notes were always forthcoming to an amount which kept their value down to par.

The gold coin could not be so deficient in amount as to rise appreciably above the rate of 113 grains of fine gold because the obligation of the Bank just mentioned to give notes for bullion meant also that sovereigns could be obtained at that rate, since the notes could be presented at once and payment claimed in sovereigns. In practice, of course, the Bank gave neither notes nor sovereigns for gold bullion, but credited persons presenting bullion with pounds in its books, and allowed them to draw on these pounds as they chose. It met their eventual demands or the demands of those to whom they transferred their claims either with additional notes issued against the gold brought in or with sovereigns coined out of it, thus in either case increasing the currency and tending to reduce its value. Sellers of bullion might, if they liked, have taken their

bullion direct to the Mint, and had it turned into coin at the rate of £3 17*s.* 10½*d.* per ounce standard, but the delay deterred them, so that this right had fallen into desuetude and the Bank alone was in the habit of getting gold coined. Thus the convertibility of bullion into notes not only "automatically" kept up the supply of notes, but also in practice "automatically" kept up the supply of gold coin so as to prevent it rising in value above the rate of 113 grains to £1.

This was being "on the gold standard." The system had been in force in England since 1821; all the great Western countries had one by one adopted it in principle, and in the East since 1898 India had become an adjunct to the gold-standard area by maintaining an exchange policy under which the value of her rupee currency was kept at a fixed ratio (15 to £1) with the English gold pound.

### § 2. *General Abandonment of the Gold Standard in* 1914.

A government and people really well versed in elementary economics could quite well maintain a metallic standard of currency while carrying on a war. Napoleon did so, and was only beaten by the enormous odds against him in other respects. A country which has the misfortune to be involved in war and is hard pressed by the enemy is, of course, acting quite reasonably when it parts with its gold in order to buy things of more immediate necessity from abroad. In doing so it is only acting as any private individual with ordinary common

sense does in analogous circumstances. There is, too, no mystery about the method by which the government can get possesion of most of the gold in the country. With the proceeds of taxes and loans it can buy up all that is not current coin, and the current coin can be extracted from the pockets and tills of the people by printing a convenient paper legal-tender substitute and making all payments in it, while retaining all coin received. The coin which is in the cellars of banks can be commandeered, and the new paper given in exchange for it without causing any financial crisis or disturbance.

This can be done without issuing more of the new currency than there existed of the old; and consequently the change from a gold to a paper unit of account, say, from a gold pound or sovereign to a paper pound, need not involve any depreciation of the unit of account against gold and a consequent abandonment of the gold standard.

But to belligerents in the actual world the temptation to issue more paper than will merely replace coins obtained from the people and the banks generally proves irresistible. Each government, in its thirst for soldiers and munitions, starts a rise of prices by profuse promises to buy goods and services without much thought of how the expense is to be met. When the bills begin to come in, the revenue, augmented as yet, if at all, only by small additions, is quite inadequate to meet the additional payments. A private person, or institution, without realizable capital, in analogous circumstances,

is obliged either to borrow, even if the terms be what he calls "ruinous," or to go into bankruptcy. Bankruptcy in such circumstances is clearly of no use to a government: a government has to continue in business. A government which appeared secure and was expected by its subjects to win the war, could probably always borrow as much as was needed, if it were willing to pay the necessary price, which would be a very high rate of interest at first, but one which could be reduced by reborrowing at lower rates after the war. Governments, however, are afraid to offer good enough terms. They think it will encourage the enemy if they have to pay even only double what they had to pay for loans in time of peace. The "business community," or so much of it as borrows from banks, terrifies it with stories that, if it gives high interest, the rates charged to private borrowers will rise and a "deadly blow be struck at the industry of the country, which has to support the war." Economic intelligence is not sufficiently widespread to enable the government to reply that the industries serving the war directly, or, by the provision of necessaries indirectly, will be able to pay, and that the more the others are closed down for the time the better.

To issue more paper currency is an easier expedient for securing increased spending power than borrowing, and very much quicker than taxation. Moreover, the issue of new money, taking place as it does at the central market for loans, commonly called the Money Market, keeps down the rate of interest in that market and so appears to enable the

government to borrow on better terms. By raising prices all round it increases the amount of " money " saved by the people and therefore available to be borrowed by the government, and also increases the money yielded by income taxes and *ad valorem* commodity taxes. Lastly, but not least important, it is supposed that if money incomes increase, the people will be less discontented with a diminished amount of material well-being, which seems to them to come from high prices, than they would be with that diminished amount of material well-being if it seemed to come from diminution of spendable money income.

The European belligerents of 1914–18 succumbed to these inducements without a struggle. The first step, the suspension of all laws and regulations securing equality between their units of account and a definite weight of gold, was made easy for them by the popular belief that gold is the sinews of war, and that their gold would get into the hands of the enemy if free dealings in it continued. One and all they abandoned the gold standard with its " automatic " limitation of issue of currency. To be in the fashion and smitten with groundless fear that the belligerents would drain away their gold reserves, the neutral gold-standard countries in Europe followed the belligerents in suspending by one means or another the limitation imposed by the gold standard.

### § 3. *Expansion of Currencies.*

The simplest method by which a government can secure purchasing power by the issue of additional

purchasing power is by itself printing the new currency and paying it away directly for goods and services. But this is too honest a method for common adoption. The usual plan is to empower the State bank to issue as much legal tender currency as it requires. This obviously makes it impossible for the bank to be unable to meet its obligations, and so enables it to lend to the government as much as ever the government likes to ask for. The government is then able to pay out large cheques for goods and services, thereby raising their value reckoned in the unit of account. The higher prices lead people to want larger stocks of currency, and thus the issue of the additional currency can be easily represented as "response to a legitimate demand for more currency caused by the rise of prices." That rise is then attributed to the machinations of "profiteers" or the "unconscionable demand of the working classes for high wages," or the "scarcity of commodities," or anything except the real thing which has made it possible—the removal of the limitation on the issue of currency.

The British Government, true to the Treasury tradition of avoiding simplicity at all costs, invented a plan even better adapted for confusing the mind of the people. Instead of either openly issuing the new notes itself or empowering the Bank of England to increase bank-notes without limit, it set up an impersonal institution called the "Currency Note Account" for the issue of £1 and 10*s*. notes which were officially called "Currency Notes," but were generally called "Treasury Notes," or colloquially,

" Bradburies," after the Secretary of the Treasury who signed the earliest issues.

Nominally the new notes were (as the Bank of England notes continued to be) redeemable in gold at the Bank, but this legal convertibility was useless in practice, because the war conditions made export of gold impossible from the outset, and soon it was made illegal both to melt gold coins and to export gold whether in the form of coin or bullion.

The Account was located at the Bank of England and the notes were thence obtained by the other banks and the public, though the Bank managed to keep them entirely out of its weekly published accounts. A portion of the issue, amounting eventually to about 20 per cent, was issued in exchange for gold and silver coins and for bank-notes, which were held nominally as " cover," though there was no intention of paying them out under any circumstances. The Bank took the remainder of the issue as it gradually emerged, crediting the Account with the sums so taken in its books, but the Account, which for this purpose at least was called a " Public Department," then promptly lent to the Exchequer (under the cloak of " Ways and Means Advances from Public Departments " and Treasury Bills) the balances which it thus obtained at the Bank. The proceeds of issue therefore flowed into the Exchequer just as much as if it had paid out the notes itself. The interest paid to the Account was only a sham, as the Account repaid it to the Exchequer from time to time, less the small expense involved in printing and managing the issue.

There seems, however, little reason to suppose that the particular method of issue adopted by the different countries exercised much influence on the amount of currency created by each of them. That depended on more substantial differences of conditions.

Early in 1920, when the hectic period of exaltation which immediately followed the end of the war was waning, the Board of Trade estimated that the total currency (notes and coin taken together) of the United Kingdom had been multiplied since 1913 by about 2½, that of France by nearly 4, that of Italy by about 5⅔, and that of Germany by 12. Those of Austria and Russia had increased by a great deal more. Even the neutrals had used with considerable effect the liberty which divorce from the gold standard had given them. In Sweden, Denmark, Holland and Norway currency had increased faster than in Great Britain.[1]

§ 4. *Depreciation of Currencies and of Gold.*

Owing to government control of prices, changes in the kinds of commodities produced, and the other abnormal circumstances of the time, the national index numbers of prices were more than usually incapable of showing exactly how much the currencies had diminished in value reckoned in commodities as a whole. So far as they go, they show considerable correspondence between the expansions of the various currencies and their depreciations. They also show unmistakably that gold, while, of

[1] *Statements of Production, Price Movements and Currency Expansion in certain countries*, Cmd 434, continued in Cmd 734.

course, appreciating in terms of the depreciated currencies, had been depreciating in terms of commodities in general. In the United States and Japan the dollar and the yen would purchase as much gold as in 1913, though according to the wholesale price indexes they would only buy 40 per cent of the commodities in general which they would have done in 1913. In the United Kingdom the pound would buy 78 per cent as much gold, but only 31 per cent of the old amount of commodities included in the index-number schedule.

This failure of gold to rise in price (that is, in value as erroneously measured by the national currencies) so much as the aggregate of other commodities as estimated by the index numbers took place because the more hardly pressed belligerents were induced by stark necessity to part with a large portion of their stocks of gold in exchange for things more immediately useful for war. The six greater European belligerents, instead of buying newly produced gold, as in time of peace, paid away to neutrals and the less hardly-pressed of the belligerents in exchange for goods and services an enormous mass of gold out of their bank reserves and the pockets, tills and jewel-cases of their patriotic subjects. The gold bank-reserves of the European neutrals (Spain, Switzerland, Holland, Sweden, Denmark and Norway) went up from about 13 million fine ounces to about 49, and those of Japan, the United States and Argentina from 103 to 163 millions, and this change of the location of gold was obviously due to the hard-pressed belligerents'

diminished demand for gold rather than to any increase of demand by the rest of the world.

The people of the various countries disliked the high prices of commodities more than they enjoyed the higher money payments which they received for their services. Getting more money, they were infuriated when they found that their real condition was not improved but rather worsened. Governments tried to placate them by alleging that this was the fault of "profiteers," but that scarcely improved matters, as it only led to complaint that the governments did not control or hang the profiteers. If maximum prices were fixed for an article, people stood in a queue to get it and those at the top of the queue bought so much that those at the bottom got none. If an article was rationed, some people got more than they wanted and others consequently got less than they need have done.

Governments on their side found depreciating currencies unsatisfying, because though some sources of revenue were made by them to yield more money, the gain in this direction was quite insufficient to cover the increased money-cost of administration and of working institutions like the post office or State railways.

Moreover, the fact that the depreciation of the currencies was not uniform, and never proceeded at the same rate as between the different countries, was extremely disturbing to international commerce.

§ 5. *"Stabilization."*

The natural outcome of the widespread dissatis-

faction was an almost universal desire for " stabilization," which had different but always effective attractions for different classes. The receivers of wages, salaries and fixed incomes from property thought of it as a stoppage of the rise in the price of commodities, governments thought of it as a stoppage of the rise of salaries and other expenses of government, and the persons and companies interested in international trade thought of it as putting an end to the troublesome fluctuations of foreign exchange.

The combination of these views led inevitably to a return to the gold standard. A different and wiser world might have decided otherwise, but no other decision was possible in the actual world in that decade. Purely paper currencies had turned out a very poor substitute for the old gold standard currencies, and it was almost universally believed that " cover " rather than limitation of amount was the thing which maintained the value of " sound " paper currencies. And, if the virtue of limitation had been understood, no one could have suggested any substitute for the gold standard as a practical means of applying limitation to national currencies in such a uniform way as to secure stability of the currencies as between one another. No one except a few experts in economics thought of stability in any other sense than stability with gold, and stabilization was identified with return to the gold standard.

§ 6. *The Cunliffe Limit in England.*

In England a definite limitation of currency was

introduced at the end of 1919 as a first step towards the restoration of the old gold standard. The Cunliffe Committee, which was appointed in January, 1918, "to consider the various problems which will arise in connection with currency and the foreign exchanges," had made in August of that year (when the first edition of this book was being written) an interim report which favoured the retention in the future British currency system of the principle of the Bank Charter Act of 1844 that the paper currency should be limited by the requirement of 100 per cent cover for all notes issued above a certain maximum, and recommended that after the completion of demobilization till the amount of that maximum could be definitely fixed, the actual highest amount reached in any one year should be the legal maximum for the next. It rejected the suggestion, "urged in some quarters, that in order to make possible the provision of a liberal supply of money at low rates during the period of reconstruction further new currency notes should be created with the object of enabling banks to make large loans to industry without the risk of finding themselves short of cash to meet the requirements of the public for legal-tender money."

After a year and a quarter of apparent somnolence, this Committee awoke again to activity, and presented, on December 3, 1919, a short Final Report, of which the important part was the statement that "effect should now be given to the recommendation made in our Interim Report that the actual maximum fiduciary circulation in any year

should become the legal maximum for the following year." The Government, Mr. Austen Chamberlain being Chancellor of the Exchequer, forthwith adopted the recommendation, issuing to the Bank of England and the Houses of Parliament a Treasury Minute, dated December 15, 1919, which prescribed that during 1920 the fiduciary circulation of Currency notes, that is, the amount of the issue not covered by gold of Bank of England notes, should not exceed £320,600,000 (the maximum so far reached in 1919), and that in years subsequent to 1920 it should not exceed whatever was the maximum actually reached in the preceding year.

In estimating the importance of this measure we must remember that the obligation of the Bank of England to keep 100 per cent cover against all notes issued above a certain fixed amount had taken on a new and much greater importance since convertibility into gold coin freely exportable and meltable had been taken away during the war. Before the war, if the 100 per cent requirement had been abrogated, bank-notes would still have been limited by the existence of convertibility to whatever amount could be kept in circulation without depreciation. Convertibility being removed by the circumstances of the war and the regulations made under the Defence of the Realm Act, the requirement of 100 per cent cover became the only limit. So long as sovereigns or other gold came into the Bank without any premium, the bank-note issue did increase; but this source was drying up and certain to become negligible before long, and after that the bank-note

issue must become an amount incapable of appreciable increase until the depreciation of the paper against gold disappeared. Thus the Cunliffe Committee had no need to trouble about bank-notes.

The scheme consequently put an absolute limit on the whole paper currency so long as the pound was depreciated against gold. The Government was not likely to buy gold at a premium to hold against additional Currency notes, and, as the amount of bank-notes was fixed in the way just explained, to buy bank-notes to hold against additional Currency notes would only mean that the public would have to give up one five-pound bank-note for each five one-pound Currency notes—a substitution of small denominations for large which would not affect the total currency in their hands at all.

The Treasury Minute, reviving memories of the 1797 "Restriction" Act, speaks of "restricting" the Bank of England from issuing notes above the maximum, as if the Bank was something more than the mere agent of the Treasury in the matter; but there is no getting over the fact that the Currency and Bank Notes Act, 1914, gives all power to the Treasury—"The Treasury may, subject to the provisions of this Act, issue Currency notes for one pound and for ten shillings," and "Currency notes may be issued to such persons and in such manner as the Treasury direct." [1] The Minute really amounted

[1] The remainder of Clause 2, of which these last words form the opening, runs, "but the amount of any notes issued to any person shall, by virtue of this Act and without further registration or assurance, be a floating charge in priority to all other charges, whether under statute or otherwise, on the assets of

to a self-denying ordinance by which the Treasury bound itself to provide for all the future outgoings by other means than the issue of notes.

Our newspapers were fond of adjuring foreign governments which were inflicting increasing currency issues on their subjects to "balance their Budgets." The advice was defective in form, since all Budgets, like other accounts, balance, unless, which is unlikely, they contain an arithmetical error. What is really wanted is that the Budget, or rather the actual receipts and payments, should balance *without the receipts including anything from issues of paper money*, and this is what was undertaken by the Treasury when it issued the Minute of December 15, 1919.

For a good many weeks the fruits of the undertaking were not very visible. The Bank, no doubt from intelligent anticipation, had on November 6 raised the bank-rate 1 per cent above the absurdly low rate of 5 per cent which had been maintained by the help of the output of new currency since April, 1917. But prices went on rising fast. As for the note issue, Christmas is the time of year at which people arrange to have most cash in their pockets: before Christmas it is drawn out of the banks in large quantities and they meet this drain by drawing from the Bank of England. When the season is over the public has spent the money, and

that person." They suggest, what is probably true, that the intention of the Act was only to provide loans in cash to individuals or banks in temporary financial difficulties owing to the war, and that the use which was made of it was contrary to its spirit though not perhaps to its letter.

the extra notes trickle back as they are paid into the banks by shopkeepers and entertainers and others. The banks pay them into the Bank of England, so that there is always a great drop in the amount of notes outstanding in the course of January. But when the seasonal drop was over in 1920 the prospect of the limit stopping the general slope upwards, which had been going on for five years, began to exercise the influence which the pre-war impossibility of getting unlimited sovereigns without paying full value for them had always exercised. The banks, foreseeing tightness, became chary in making advances, and the Bank of England raised the bank-rate to 7 per cent in April. The banks did not, as some alleged at the time, "restrict credit" out of mere malice, nor from an unusual access of covetousness, nor out of a patriotic desire to end the rise of prices, but because they "hadn't got the money," and the reason why they had not got it, and did not expect to have it, was the adoption of the Cunliffe limit.

Under this damping influence, the post-war boom, which was merely an extension and exaggeration of the war boom rather than an independent boom, rapidly passed away, and a great fall of prices began.

Following the spirit as well as the letter of the Cunliffe Report, the Treasury did not content itself with observing the limit laid down in the Minute, but so arranged its incomings from taxation, interest-bearing loans, and other sources that they exceeded its outgoings for current expenditure, redemption of debt, and other purposes. The result was that

during the fiscal years, April 1, 1920, to March 31, 1923 (or more exactly in the period between March 31, 1920, and March 28, 1923), it was able to burn £50,000,000 of Currency notes besides adding to the reserve held against such notes £7,000,000 of silver coin withdrawn from circulation and £16,500,000 Bank of England Notes.[1]

By the end of the three years the work of restoring the pound to the old parity with gold was nearly done. In March, 1920, the paper pound was only worth about 70 per cent of the gold contents of a sovereign; in March, 1923, it was worth over 96 per cent.

But the British Treasury loves to do good by stealth and made no parade of the fact that it was steadily redeeming non-interest-bearing debt in the shape of paper currency and substituting interest-bearing debt. Nobody could discover in the national accounts any record of the seventy-three millions spent in withdrawing currency, any more than they had been able to discover any entry of the three hundred millions received by issuing it. Just as the receipts had been disguised as money obtained by issuing Treasury Bills or by getting advances from Government departments, so were the expenses disguised as money spent in redeeming Treasury Bills

[1] It is true that in the same period the Bank of England notes increased by £19 million, but this is not to be set off against the withdrawals mentioned in the text. It was entirely due to the fact that the other banks were persuaded to exchange their gold for bank-notes, and there seems no reason to believe that the notes left their vaults any more than the gold had done, while at the Bank of England the gold was simply stored away against the notes.

and repaying advances from Government departments, and few persons suspected that the Currency Note Account was the largest holder of Treasury Bills and the largest advancer among Government departments. Questions intended to bring out the facts were always smothered by Ministers in the House of Commons, and the uninstructed public imagined that the reduction of the aggregate currency by some fifteen per cent was due to the fall of prices, just as they had supposed that the increase of currency from 1915 to 1919 was due to the rise of prices. This doubtless made it somewhat easier to carry out the policy; but it was unfortunate in that it prevented foreign countries from understanding what was done, and thus deprived them of what ought to have been a useful example.

### § 7. *Multiplication and Depreciation of the German Mark and Restoration of the Gold Mark.*

For a complete contrast to the English deflation described in the preceding section we turn to Germany.

There the issue of currency was comparatively a simple matter. The Reichsbank, relieved at the beginning of the war, like other central banks, of the obligation to keep its notes at a par with gold, and allowed to issue as many as it liked, could lend an infinite amount of marks, since however much it allowed its customers to draw on it, it could never be short of cash.

In England, though chairmen of the great banks sometimes talked as if this were the ideal state of things, there was always against " inflationary bor-

rowing " a fairly strong body of opinion which imposed a certain moderation on the Government and the Bank of England. Monetary theory was not well understood in England, but in Germany its state was much worse, and the whole control of financial and currency policy was in the hands of persons who derided the principle of limitation and imagined that the relative value of national currencies depended not on their value at home, where alone they can be used, but on the balance of trade. Moreover, as soon as the war was ended, the German government was harassed by the incessant demands of its victorious opponents for the payment of indemnities, or " reparations," as they came to be called, so huge that no man in his sober senses could ever have supposed it possible to collect them from a population which would naturally be far from desirous of paying them. With a limited currency the German State could have adopted Adam Smith's recommendation of " a fair, open, and avowed bankruptcy," and have failed to pay its creditors and reduced its expenses to the smallest possible amount. This would have awakened the Allies to a better appreciation of the realities of the situation. But the resource of bankruptcy is never adopted by debtors who have relations quite willing to lend them as much as they care to ask for. Such a relation the German government had in the Reichsbank with its power to create unlimited amounts of money. So it borrowed freely from the Reichsbank, and when the additional money created in consequence raised the money cost of government, it

borrowed more, and always more and more. At the beginning of the war the Treasury bills discounted by the Reichsbank amounted to no more than 300,000,000 marks; at the end of the war they were a little over 27 milliards; in the next two years they rather more than doubled; in the next single year, 1921, they again rather more than doubled; in 1922 they were multiplied more than tenfold. After that, in 1923, under the influence of expenditure to support the resistance of the Ruhr to the France-Belgian occupation, the increase became incredibly more rapid, so that by November 15 the amount had risen to 189,801,468 billions in the English sense in which a billion is a million millions (not, as in America and in rather archaic French, merely what is now called a milliard, i.e. a thousand millions).

The Reichsbank could not, of course, refuse to lend the government all it asked for, but, believing in the virtue of "cheap money" in the money-market sense of a low rate of interest, it was not content to lend to the government only but also lent freely to commercial borrowers, who were excessively plentiful because the mark's rapid loss of purchasing power made it enormously profitable to borrow marks and buy something with them, as almost everything was certain to be worth a great many more marks in a very short time. Throughout the period the bank made no attempt to charge rates of interest and discount anything like adequate to counterbalance the enormous profits obtainable owing to the rise of prices.

At the end of 1918 the Reichsbank note issue amounted to 22,200 millions of marks. In the next two years this amount had been more than trebled. In 1921 the trebled amount was increased by two-thirds. In 1922 this increased amount was multiplied by eleven, which brought it to more than an English billion and a quarter and made it 57½ times as large as at the end of 1918. But this was nothing compared to the increase in 1923. In the first six months of that year the amount rose to 17 billions; on August 23 it was 274; on September 15, 3,184 billions; on October 15, 123,250 billions; on November 15, 92,844,721 billions and on November 20 about 180,000,000 billions.

This looks an enormous sum; but the elasticity of demand for marks had been far less than unity; the decline of the mark's purchasing power had been much greater than the increase in the number of marks. It now required twenty billions of marks to buy the gold in a 20 mark gold piece—the ratio of paper marks to gold marks was a billion to one—so that the whole Reichsbank issue was only worth about 180 *million* gold marks or nine million gold pounds.

The race between the increase of the number of units and the shrinkage of the value of the unit ended there. A new currency, called at first "Rentenmarks," because recommended to the people by some pure eyewash of being "covered" by land securities, but really owing its value to the fact that it was limited in amount, at first to an arbitrary sum and subsequently by equivalence with the same

amount of gold as the pre-war mark, was introduced at the rate of one to a billion of the depreciated marks. The biggest of the depreciated notes were exchanged for the new at that rate, but the rest were waste paper. Who would accept a shilling as remuneration for collecting and counting out a million one-million mark notes, to say nothing of the smaller notes ? The settlement of old contracts gave the legislature and the courts plenty of trouble, and pure *rentiers* lost almost all their property, but from the end of 1923 Germany was back again on the gold standard with a new mark equivalent to the same amount of gold as the pre-war mark.[1]

§ 8. *Restoration of the English Gold Pound in* 1925.

We left the English pound in Section 7 nearly restored to its old parity by March, 1923. Four months more at the rate of progress then being achieved would have brought it right up to par. But, as often happens in monetary history, the cup was allowed to slip from the lip. The policy of reducing the paper currency was abandoned in favour of keeping it stationary (except of course for the seasonal and other temporary variations). It is as yet unknown whether this was due to a change of personnel which had taken place at the Treasury, to ministerial fears of unpopularity, to timidity on the part of high financial authorities

[1] The rentenmarks were very soon converted, one for one, into the new reichmarks. The nomenclature is a little confusing to a foreigner. I asked a German in 1924, "If your present marks are simply 'marks,' what do you call the marks of 1923 ?" His reply was, "We do not speak about them."

about the return to the gold standard, or to a belief that gold and the paper pound would now approximate in value without any further reduction of the paper currency. Anyhow, this belief turned out to be correct, though two more years were required for the process ; after a shocking 8 per cent relapse in the latter part of 1923 and January, 1924, the pound and gold gradually approximated, until early in 1925 98½ per cent was reached.

Inducement to shrink no longer from the final plunge was then furnished by the decision of South Africa to adopt the report of Professor Kemmerer and Mr. Vissering and return to the gold standard on July 1. It was not to be expected that London could view with equanimity the prospect of continuing on a paper standard when a British Dominion with a mint of its own was using and reckoning in gold sovereigns.

Accordingly Mr. Churchill, as Chancellor of the Exchequer, announced in his Budget speech at the end of April that the Treasury would henceforth allow the Bank of England complete freedom to export coin and bullion. As it was understood that the Bank was willing to export, if necessary, this at once destroyed the basis on which the paper standard rested (as explained on pp. 61, 62) and restored the gold standard. The pound once more became identical in value with a sovereign which could be freely exported. The Government ceased at once to exercise its power of preventing the export of gold, and the Act which gave it that power was allowed to expire at the end of the year. The Gold

Standard Act, 1925, abolished the right of holders of gold bullion to have it coined into sovereigns by the Mint and the right of holders of Bank of England notes and Currency notes to demand sovereigns from the Bank, but left untouched the right of holders of gold bullion to demand Bank of England notes from the bank at £3 17*s*. 9*d*. per standard ounce, and gave the holders of Bank of England notes and Currency notes the right to demand in exchange bars containing 400 oz. of fine gold at the rate of £3 17*s*. 10½*d*. per standard ounce.

So far as standard is concerned, the difference between this system and that in force before the war was practically nil. The holders of gold bullion desirous of converting into pounds were in as good a position as before, since they had always preferred the Bank's immediate £3 17*s*. 9*d*. to the Mint's delayed £3 17*s*. 10½*d*.: the holders of notes desirous of converting pounds into free gold bullion were in a very slightly better position than before, as they could now legally demand the absolutely full weight of gold at £3 17*s*. 10½*d*., whereas formerly the bank could satisfy their demand with sovereigns and half-sovereigns which might be a little below that weight owing to abrasion within the legal limit. The few holders of sovereigns and half-sovereigns (which remained legal tender), were in the same position as before the war, except that the right of melting the coin was not restored.

The object aimed at by the change was to prevent the public being able to replace their stock of Currency notes by sovereigns and half-sovereigns.

But there was no reason to believe that the public had any desire to do this. The experience of all civilized communities has gone to show that notes are preferred to gold coin even when issued in somewhat lower denominations than for ten shillings. It should be noted that as the sovereign and half-sovereign remained legal tender, there was nothing to prevent individuals and banks from importing those which were minted in South Africa and Australia and putting them into circulation if they saw any advantage in doing so.

The Gold Standard Act, 1925, while putting on the Bank of England the obligation of giving gold bars in exchange for Currency notes, did not take away from the Treasury, *alias* the Government of the day, the power of withdrawing the Minute which established the Cunliffe limit, and thus recovering its freedom to issue an unlimited amount of notes. This weak point was removed by what was called the " amalgamation of the note-issues " effected under the Currency and Bank Notes Act of 1928, which came into operation on November 22 of that year.

That Act repealed the provisions of the Currency and Bank Notes Act, 1914, which gave the Treasury the power to create the Currency notes, and it provided that the Bank of England should redeem the existing outstanding issue by itself issuing £1 and 10*s*. bank-notes in exchange. To balance the liability thus taken over by the Bank, it prescribed that the Bank should receive the whole of the bank-notes (£56,250,000) and silver coin (£5,250,000)

held in the Currency Note Account, together with a portion of the Government securities held in the Account, sufficient (with the bank-notes and silver coin) to make up a total equal to the amount of Currency notes outstanding (£286,750,000). The bank-notes transferred, which had been purely unnecessary and meaningless intermediaries between Currency notes and the £56,250,000 of gold bullion held against them, were immediately cancelled, and this eliminated a double reckoning in the total of paper currency which had always deceived most foreign observers. The Act further provided that any surplus left in the Currency Note Account after these transfers to the Bank was to go to the Exchequer, thus winding up the whole account.

This scheme, of course, involved the disappearance of the "Cunliffe limit," so far as its curious use of the maximum fiduciary issue of the previous year was concerned. But the limit arrived at for 1928 was, so to speak, embalmed in the provision that the "fiduciary issue" (as the amount of bank-notes of all denominations which need not be covered by gold is now officially as well as commonly called) should be £260,000,000, since this sum was arrived at by adding the £245,000,000 permissible for 1928 under the Cunliffe limit to the old twenty million fiduciary issue of the Bank under the Act of 1844, and deducting five millions for notes expected to be thrown out of Ireland by the Free State's decision to have a paper currency of its own. This £260,000,000 may be varied by the Treasury on the request of the Bank, but a variation so made,

if in the upward direction, will not continue in force for more than two years without parliamentary sanction.

The profits of the whole of the issue (notes for £5 and upwards, as well as for £1 and 10s.) have to be accounted for by the Bank and paid to the Exchequer.

## § 9. *The Breakdown of the Gold Standard in September, 1931.*

While these events were occurring in Great Britain the other countries which had left the gold standard were straggling back to it by various routes. Germany's rather inconvenient method of superseding a vastly depreciated unit of account by a new unit with the same name and the same gold content as the pre-depreciation unit was adopted by no other country. The new countries established by the peace treaties shook themselves free of the old currencies and started fresh with new units with new names. Those of the old countries which had only small depreciations slowly deflated till their units recovered their old parities with gold. Those with heavier depreciations accepted the existing situation and regularized it by legislation. Thus Austria created a new unit called a " schilling " with a gold content of about one-third of the old crown, but made it the equivalent of 10,000 of the depreciated paper crowns ; Belgium " stabilized " her depreciated franc at rather more than one-seventh of its old gold value, but introduced a new unit of account called a " belga," equal to five of

these francs, and so to about five-sevenths of the old gold franc. Italy settled the value of the paper lira at rather more than a quarter of the old gold lira. And at last France, after various wild movements in the value of the paper franc had occurred, " devalued " the franc to one-fifth of the gold content of the old gold franc, which still survived intact as the unit of account only in Switzerland.

The demand for gold then became too great to allow the existing level of prices reckoned in gold to continue. Having cast off their mistresses—their unlimited paper currencies—and returned to their old love—gold—the various countries " loved not wisely but too well." Two at least of them, the United States and France, exhibited an inordinate desire for gold which had most unfortunate results. Taken together, the central banks of the world added to their stocks of gold a net amount equal to about 2,000 million American dollars in the five years 1926 to 1930. Such an immense demand, taking off, as it did, nearly the whole production from the mines, was bound to raise the value of gold, except in so far as it was met by the abandonment of private hoards and the melting down of ornaments. There was no reason to believe that there was till near the end of the period any considerable falling off in the demand for gold to be used in the arts and industries, which had long been estimated to absorb about half the annual production from the mines.

The accumulating banks were of course sublimely unconscious that they were raising the value of gold, since they only gave the prices prescribed for it

under their gold-standard arrangements, and these prices remained unaltered. They declared that they did not seek the gold; it was offered to them at the prescribed buying price, and they could not refuse to give that price without breaking the law, and the legal price could not be altered by legislation without their country going off the gold standard and disordering all its foreign exchanges.

This would have been a perfectly valid defence if the banks and legislatures of each country had possessed no control at all over the amount, and through the amount, over the value or purchasing power of their currency. Though it is true that every country on the gold standard must keep its currency in conformity with that standard or go off it, it is notorious that each such country can make the slight variation in the value of its currency which is necessary to prevent gold "flowing in." All that the countries which accumulated gold had to do to stop the accumulation was to increase their paper currencies enough to bring down the value of their unit of account to the point at which the prescribed buying-price for gold became unattractive to potential sellers of gold.

They were prevented from doing this partly because they had encumbered themselves with perfectly absurd laws which prescribe minimum ratios for reserves and thereby prevent large amounts from being used for the purpose for which a reserve is intended—that is, to be paid out on occasion—so that it becomes desirable to hold a reserve which is usable in addition to the legal and unusable or

sterilized reserve, and partly because of the old superstitious reverence for gold which makes an influx of gold always a matter for rejoicing in the vulgar mind. They were also influenced by a certain confusion of thought which prevented them having any comprehension of the way in which their acquisition of gold raised the value of gold, and with it the value of all the gold standard currencies. "If," they argued, "we buy a certain amount of gold, at the same time we enlarge our currency by at least that amount, and generally by several times as much; surely that tends to raise, not to reduce prices?" The answer to that is that it is true the increase of currency tended to raise prices rather than to lower them, but that increase need not have been accompanied with a purchase of gold which to some extent defeated the tendency of the increase of currency. If the increase of currency had been made *without* purchasing gold, the gold purchased would have gone to the next highest bidder, who by hypothesis was not prepared to give as good value, and the value or purchasing power of gold in the world at large, together with the value of all the gold-standard currencies, would have been lower. The principle was sufficiently illustrated in the war period, when the cessation of demand for gold by the European belligerents diminished enormously the purchasing power of gold and of the few currencies which remained on the gold standard.

The unnecessary enhancement of the value of gold, if persisted in, would by itself have destroyed

the gold standard in the long run, as Professor Cassel, Sir Henry Strakosch, and other good authorities feared. I myself attacked it in two letters to *The Times* in January, 1931, and more at length in *Modern Currency*, which I began to write immediately afterwards. But a few years more of mismanagement of the gold standard might have been endured if the world had been more successful than it was in avoiding financial and fiscal delusions.

The Americans, intoxicated with the success of mass production and believing that the demand for mass-produced articles was insatiable, provided enough money was paid to the workers who produced them, over-estimated the future profits of enterprises to an extent unequalled since the South Sea Bubble. As they priced " common " (or, as we say in England, " ordinary ") stocks and shares higher and higher, they imagined themselves growing richer and richer, " as it were in their sleep, without working, risking, or economizing," like Mill's landlords, only ever so much faster. When the crash came, and they recognized that the Ford-Hoover elixir of prosperity was no better than the old well-known recipe for raising oneself by pulling on one's bootstraps, they forthwith plunged into a depression the depth of which was as unreasonable as the height of their elation had been. Depression led, as depressions do, to a dislocation of demand which brought about unemployment and consequent diminution of production. As an American said to me at the time, the controversy between the advocates of saving and spending became of small interest

to him and his countrymen, "because we can't do much of either at present."

Meanwhile, Europe had been working towards a somewhat different kind of catastrophe. Countries which had been hard hit by the war and the revival of nationalist separatism to which it had given rise borrowed imprudently, both publicly and privately, from those which had suffered less, and these others lent to them imprudently, not so much because they had confidence in foreign borrowers, as because their politicians convinced them that their own condition was very parlous and they did not know much about that of the borrowers. The period of easy foreign borrowing drew to a close when the return of France to the gold standard in 1928 and the height of the American Stock Exchange boom diminished the readiness of potential lenders to lend abroad, and it came to an end when the weakness of central European financial institutions was made apparent in 1931 by banking failures. The former European lenders were no longer willing to lend, and America was both unwilling and unable.

England, or rather the banks and other financial institutions in London taken as a whole, had been acting a somewhat imprudent part as banker for various countries. They had accepted deposits expressed in pounds sterling (supposed by the depositors to be equal to definite quantities of gold) from some foreign quarters and lent them out (reckoned in the same standard) to other foreign quarters which now began to find difficulty in paying interest, and were still more incapable of repaying

the principal. At the same time some politicians, laudably anxious to curb the profligacy of the unemployment insurance system and not too careful about the means, raised a perfectly unreasonable scare about the currency, by making the utterly unfounded assertion, contradicted by thousands of historical examples as well as by the most elementary theory, that any surplus of Government expenditure over revenue must necessarily be followed by inflation and consequent depreciation. A right reverend bishop went so far as to declare that the pound might soon be worth no more than a penny. Other politicians raised the even more ridiculous cry that the foreign trade statistics showed that we were "living on our capital, a course which could only end in national bankruptcy." [1] These vaticinations naturally shook the confidence of the foreign depositors, and their alarm was increased by the mutiny in the British fleet which occurred when the men were informed that their pay was to be cut down.

The situation was unpleasant, but by no means desperate. The foreign depositors asked for their money back, and wanted to have it in gold; those whom they had trusted with it had lent it abroad to debtors who could not be made to pay it back quickly enough, if at all, but the resources of straightforward finance were by no means exhausted. In older times many a solvent bank had been confronted with a purely domestic run for gold and had

[1] See my Sidney Ball Lecture, "Balance of Trade Delusions," 1931. Reprinted in *Economic Scares*, 1933.

been unable to collect what its debtors owed it quickly enough to meet the demands of its importunate creditors. It did not then immediately close its doors or offer its creditors fifteen shillings in the pound composition. It paid out whatever gold it had boldly, and borrowed boldly from its rival down the street, so that the gold which was taken from it and went down the High street to be deposited with its rival returned quietly by the back lane to be paid out again. In modern times banking has become international, but its principles are the same ; the London financial congeries should have boldly paid out what gold it had, and met the balance of what was demanded by its foreign creditors with funds raised by borrowing from less nervous foreigners, even if the charges were somewhat heavy.

But pusillanimity reigned. So far as borrowing was concerned, it is true, London did not do badly. The Bank of England secured fifty millions from France and the United States, and soon afterwards the Treasury got eighty millions from the same sources.[1] This, with the hundred and fifty millions of gold in the Bank, would have met all demands if the gold in the Bank had been boldly paid out. Nothing was required to make this gold available except a request from the Bank and the assent of

[1] The Treasury was not without responsibility for the trouble. Partly under the influence of "cheap money" fallacies and partly from parsimony, it had allowed a great mass of short-term debt to continue in existence after the war. If this had been converted, as it should have been, into long-term debt, it is safe to say that there would not have been nearly so much foreign funds repayable at short notice in London.

the Treasury (see above, p. 136). These institutions, however, instead of arranging for the whole sum to be made available, confined themselves to releasing a paltry ten per cent—fifteen millions—of it, and took no effectual steps for combating the unfortunate impression which the form of the authorization provided for by the law—" an increase of the fiduciary issue " was likely to create in the minds of foreigners obsessed with the fear of inflation.

The borrowings and the fifteen millions of freed gold did not suffice to satisfy the foreign creditors' demands, and then in the absence of their Governor, who was on the Atlantic, the Bank Directors, with £130,000,000 still in the cellars, decided on the 18th or 19th of September to " protect their reserve " at the expense of their solvency. Like their predecessors of 1797, but with £129,000,000 less reason, they approached the Government with a request that they might be relieved of the obligation to pay their creditors in anything except their own notes. The Government agreed, on Sunday the 20th, and induced Parliament, on Monday the 21st, to pass the Gold Standard Amendment Act, 1931, which enacts that the provision of the Gold Standard Act, 1925, giving the holders of notes the right to demand in exchange bars of gold at the rate of £3 17*s.* 10½*d.* per standard ounce (see above, p. 134) " shall cease to have effect."

The pound sterling thus once more became a paper pound, but the issue of paper pounds was not, as in 1797, entrusted entirely to the Bank, nor, as in 1914, entirely to the Treasury. The Currency

and Bank Notes Act of 1928 remained in force, so that the fiduciary issue was still variable only on a request of the Bank assented to by the Treasury, and the total note currency was still an amount equal to the fiduciary issue plus the gold in the Bank (see above, p. 136).

The fact that the total note currency did not alter disappointed the expectations both of those who had believed that " going off the gold standard " necessarily involved a prodigious and disastrous inflation and of those who believed it would revive the export trades and abolish unemployment. For a few days the latter belief was predominant, and, in the words of the *Manchester Guardian*, the crowd felt a curious elation " to think what gay dogs we can be." But it soon became evident that history was once more to illustrate the truth of the main principle inculcated in this book, that the value of a currency is maintained by limitation of its amount. The amount of currency not having been altered, prices moved scarcely at all. The relation between gold and the pound, indeed, jumped wildly in favour of gold, but part of the jump was due to erroneous anticipation in the foreign exchange market and the rest to a rise in the general purchasing power of gold.

§ 10. *The Sequel—to* 1935.

The gold standard had been suspended in Australia and New Zealand a year before the breakdown in London. The rest of the British Empire, with the exception of South Africa, followed Great Britain immediately. So did many foreign countries, and

even South Africa succumbed in January, 1933, by which time France, Holland, Switzerland and the United States were left the only countries in which gold could be quite freely obtained at par rates in exchange for currency. In the spring of 1933 Franklin Roosevelt began his career as President and semi-dictator in the United States by declaring in favour of an immediate restoration of the pre-slump price-level and a future dollar of unvarying purchasing power. But instead of issuing more currency and consequently disgorging a large quantity of the enormous American hoard of gold, and thereby raising prices throughout the rest of the gold-standard area as well as in America, he was misled by his advisers into causing the United States to abandon convertibility in April, 1933, and six months later to embark on the palpably absurd course of buying the very commodity, gold, the dearness of which was the thing which it was desired to remove. The plan, by increasing the demand for gold, of course tended to raise its value and therefore to reduce the value of the dollar in gold, but could not of itself reduce the general purchasing power of the dollar. A reduction could easily have been effected by increasing currency, but the President and his advisers shrank from making an increase because they feared that once started, the increase would be uncontrollable.

Disappointed with the results of the gold-buying policy, they next abandoned the ideal of a dollar of unvarying purchasing power, and in January, 1934, put the United States again on a gold standard, but

with the dollar "devalued" by almost 41 per cent, 35 of the new dollars instead of 20·67 being now equivalent to an ounce of fine gold.

A dollar convertible into about three-fifths as much gold as the old dollar cannot fail to be worth eventually only about three-fifths of the commodities and services which the old dollar would have bought in similar circumstances; but there is of course no ground for expecting the lighter dollar to be any more stable than the heavier; being tied to gold, it will vary with gold just as the old dollar would have done.

### § 11. *The Future—as it appears in* 1935.

The North American devaluation—for the Canadian dollar followed the United States dollar closely—seems to have destroyed all chance of a general return to the gold parities which were abandoned between 1930 and 1933. Before that devaluation it could still be thought just possible that the central banks and other hoarders of gold might be induced to relax their grip on it, and throw enough on the market to bring down its value so much that the off-gold currencies would come back to their 1929 pars without any deflation and fall of prices below the existing level. But now it is neither conceivable that the United States, having once devalued, would raise the value of the dollar above the present rate of 35 to the ounce, nor that the off-gold countries, with their firm belief in the desirability of their own currencies being of low value reckoned in other currencies, would allow

the fall of gold to have the effect of raising the value of their currencies reckoned in American and other gold-standard currencies. They would prevent it by issuing additional currency.

The most that can now be hoped for by the most stalwart advocate of the gold standard is all-round devaluation by the countries at present avowedly or virtually off gold; in other words, a return to the gold standard at rates much below the old pars. But "once bit, twice shy." Prudence forbids a return to gold without better assurance than exists at present that the increase in the value of gold is not to be continued. Devaluation, it must be remembered, in itself is no prophylactic against a continued increase in the value of gold. At first sight it would appear to set free large quantities of gold held in bank reserves. If, say, banking liabilities are 2,000 millions and a 10 per cent reserve is kept against them, a devaluation of the unit of account to 60 per cent of its old value would appear to set free 40 per cent of the gold reserve formerly held, since 60 per cent of that gold will now be equal in value to 10 per cent of 2,000 millions of the devalued unit. This will be true so long as the banking liabilities remain at only 2,000 millions; but the very purpose of devaluation is to increase prices and money incomes, and as soon as this purpose is effected, people will maintain larger balances with their banks, and the banking liabilities will be increased in proportion to the devaluation; the gold reserves will then have to be increased in the same proportion. Devaluation thus only gives

a temporary respite. To cope effectively with a rising tendency of gold it would have to be repeated continually, whereas all the advantage attributed to the gold standard depends on its supposed immutability. It seems on the whole most probable that the rise in the value of gold will continue for at least twenty years. The supply from the mines and alluvial sources can be increased, but only at increasing cost, so that the effect of increased demand will be to raise the value, and there is much reason to believe that the demand for holdings of gold will continue to increase too rapidly to be met by the present output without a rise of value.

The present situation is that events well within the memory of middle-aged persons have enormously reduced the confidence in currencies which existed before 1914. We can only faintly picture the amazement and incredulity with which any respectable banker in 1913 would have received a prophecy that in the next twenty years England would have twice gone off the gold standard, that the German mark would have gone down to a billionth of its 1913 gold value and then been replaced by a new issue of marks in which ten years later no free dealing with foreigners was permitted, that the French franc would have been reduced to one-fifth of its gold content, and the American dollar to three-fifths. At first the distrust applied only to currencies which were " off " gold, and a pathetic belief prevailed that a return to gold would put everything straight. But distrust has spread to the gold-standard currencies. The devaluations and England's defection

from the gold standard within six years of her return to the old parity have proved conclusively that every gold-standard currency is just as much at the mercy of banking management and " arbitrary " legislation as a paper-standard currency. What immutability can be attached to a gold standard after the Bank of England with £130,000,000 gold in its vaults has resolved on a Saturday to pay no more gold out and has had its action ratified by the Cabinet on the Sunday, and by the usually slow-moving British Parliament on the Monday ? Or after an American President has been authorized to reduce the gold content of the dollar by as much as he likes up to 50 per cent, and to seize for the government a corresponding percentage of the banking reserves ?

The loss of confidence in currencies which these and similar events have caused has greatly strengthened the demand for gold both by private persons and institutions and by the semi-public central banks.

Whenever a country is expected to go off the gold standard, to devalue, or to depreciate a currency which is already on a paper standard, private speculators will try to keep command over stocks of gold in order to secure the money profit obtainable when the time comes for an ounce of gold to be declared equal to a larger amount of currency. Legislation often prevents them from finding any safe hoarding-place in their own country, but they are always able to find some foreign country which will allow outsiders to accumulate gold safely, though it denies the same liberty to its own subjects.

These hoards of private persons and institutions may be considerable, but much greater are those of the semi-public central banks. When confidence in gold-standard currencies existed, some central banks held large deposits in other central banks because they believed that these banks would give them gold in exchange whenever they asked for it. But the central banks of France and the Netherlands lost many tons of gold in 1931 by placing this confidence in the Bank of England. The lesson is learnt; each central bank will now prefer to keep all its own hoard of gold in its own vaults, and the economy of gold involved in one central bank holding a balance in another which holds only 10 or 20 per cent reserve in gold against it is at an end.

Moreover, there is no reason to doubt that the liabilities of the central banks will go on increasing in the future as they have done in the past, and that they will consider proportionate or more than proportionate increase of gold reserve to be necessary. It is true that the day of domestic runs for gold are past; the home public has been legally deprived of a right which it had long ceased to value—the right of demanding coin in exchange for notes. But in spite of nationalism, international finance and international banking continue to grow, and have introduced the danger, exemplified in London in 1931, of a run by foreigners for money which is payable to them on demand or at short notice. This danger is now so well recognized that money likely to be thus called for is spoken of as "bad money"; but the banking system is not sufficiently well-informed and

unified to be able to refuse to accept the money on the dangerous terms on which it is offered. Whether the obligation has been incurred by the central bank itself or only by some of its customers whom it has to support does not make much difference ; in either case it has to find the necessary money. If its country is on the gold standard, it must find the money in gold ; if on a paper standard, it is true that easily printed notes may legally be offered to the foreign creditors ; but too much of this will cause an alarming drop in the foreign-exchange value of the currency, and therefore the central bank endeavours to hold sufficient gold in its reserve (or perhaps in some equalization or other exchange fund nominally managed by the government) to meet such a run if it should occur. Between the end of 1930 and the end of 1934 the United Kingdom added about ten and a half million fine ounces to her central reserve of gold though she went off gold during the period ; the United States added about thirty-one millions, though she devalued ; and France, which remained on the same gold standard throughout, added fifty-four, the total for these three countries being only about 5 per cent less than the whole production of gold during the four years.[1]

The principal influence tending in the opposite direction is the declining growth of population in Western countries. Though international banking now prevents the banking liabilities of each country

[1] Bank of England *Statistical Summary* for February 1934 and February 1935.

from varying with its own population alone, the aggregate liabilities in the whole Western area must still be largely dependent on the aggregate population of that area, and may be expected to grow at a declining rate when the rate of increase of population falls. But this influence may easily be counteracted by Eastern and African adhesions to the Western banking area.

If it is true, as I suggest, that the rise in the value of gold is likely to continue, the gold standard is likely in the future to be a still more inconveniently appreciating standard than it has been in the past, and the countries which are now off it will do well, for the present at any rate, to keep off it, provided they are capable of accepting the doctrine of this book that an inconvertible currency is a commodity produced under monopoly conditions and can have its value regulated by those who determine its amount, and provided also that they can secure legislatures and governments which will exercise reasonably the power vested in them of determining its amount.

It is not necessary to believe that any monetary policy can abolish short-period fluctuations of general prices. As long as the public is feather-brained and its nominal guides and rulers no less so, these will continue, and would very probably be increased in violence by the efforts of monetary authorities to prevent them. But if the maximum limits recently in force were taken as the standard and made subject to automatic increase or decrease with population, it seems probable that inconvertible currencies,

especially if the countries in which they existed had some regard to keeping in line with each other, would be considerably more stable than those which remain on or return to the gold standard.

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